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UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

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ROBERT FALISE, et al.,
Plaintiff,

vs.

No. CV-99-7392 (JBW)

THE AMERICAN TOBACCO COMPANY, INC., et al.,
Defendants.

/

DEPOSITION OF
DR. ALLAN SMITH

Friday, August 25, 2000

REPORTED BY: MARK W. BANTA, CSR #6034

TOOKER & ANTZ

COURT REPORTING & VIDEO SERVICES

818 Mission

Street, Fifth Floor

San Francisco, California 94103

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BE IT REMEMBERED on Friday, August 25, 2000,
commencing at 9:11 a.m. thereof, at the Law Offices of

3 Orrick, Herrington & Sutcliffe, 400 Sansome Street, San
4 Francisco, California, before me, MARK W. BANTA, Certified
5 Shorthand Reporter No. 6034 for the State of California,
6 duly authorized to administer oaths pursuant to Section
7 2093(b) of the California Code of Civil Procedure,
8 personally appeared

9 DR. ALLAN SMITH,
10 called as a witness, who having been first duly sworn, was
11 examined and testified as hereinafter set forth.

12 A P P E A R A N C E S

13 ORRICK, HERRINGTON & SUTCLIFFE, LLP, 666 Fifth
14 Avenue, New York, New York 10103-0001, represented by
15 STEPHEN G. FORESTA, Attorney at Law, appeared as counsel on
16 behalf of the Plaintiffs.

17 WOMBLE, CARLYLE, SANDRIDGE & RICE, PLLC, Post
18 Office Drawer 84, 200 West Second Street, Winston-Salem,
19 North Carolina 27102, represented by THOMAS D. SCHROEDER,
20 Attorney at Law, appeared as counsel on behalf of the
21 Defendant R.J. Reynolds Company.

22 WINSTON & STRAWN, 35 West Wacker Drive, Chicago,
23 Illinois 60601-9703, represented by JEFFREY A. WAGNER,
24 Attorney at Law, appeared as counsel on behalf of the
25 Defendant Philip Morris, Inc.

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1 TOOKER & ANTZ COURT REPORTING & VIDEO SERVICES,
2 818 Mission Street, Fifth Floor, San Francisco, California
3 94103, represented by DANIEL P. DeFRANK, acted as Deposition
4 Videographer (415) 512-0295.

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1 PROCEEDINGS

2 THE VIDEOGRAPHER: Gentlemen, we are on video
3 record on August 5th, 2000. The time is 9:11. I am Dan
4 DeFrank, a certified notary public for the County of
5 San Francisco, representing Tooker & Antz, 818 Mission
6 Street, Fifth Floor, San Francisco, California, 94103.
7 Phone number is 415-512-0295. The court reporter today is
8 Mark Banta, also representing Tooker & Antz.

9 This is the beginning of tape 1 of volume 1 in the
10 case of Robert A. Falise, et al, versus the American Tobacco
11 Company, et al, in the United States District Court, Eastern

12 District of New York. The case number is 99 CV 7392 for the
13 deposition of Dr. Allan Smith.

14 The deposition is located at Orrick, Herrington &
15 Sutcliffe, 400 Sansome Street, San Francisco, California,
16 noticed by attorneys for the defendant and the videotape is
17 being produced by the same. Counsel, will you please
18 identify yourselves and your clients.

19 MR. SCHROEDER: Tom Schroeder, R.J. Reynolds
20 Tobacco Company.

21 MR. WAGNER: Jeffrey Wagner for Philip Morris.

22 MR. FORESTA: Steve Foresta representing the
23 Plaintiffs.

24 THE VIDEOGRAPHER: The reporter may swear in the
25 witness.

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1 (Witness sworn.)

2 EXAMINATION BY MR. SCHROEDER

3 MR. SCHROEDER: Q. Dr. Smith, would you give us
4 your complete name, please.

5 A. Allan Smith.

6 Q. Dr. Smith, you are a medical doctor; is that
7 correct?

8 A. Yes.

9 Q. You've had your deposition taken many times
10 before? That's correct, isn't it?

11 A. Yes.

12 Q. And so you understand that I'll be asking you a
13 series of questions today, and if at any time you don't
14 understand my question, would you let us know? Otherwise,
15 we'll proceed with the understanding that you've understood
16 the question sufficient to give a response.

17 A. Yes.

18 MR. SCHROEDER: All right. Let's go ahead and
19 mark this as Exhibit 1.

20 (Exhibit 1 marked.)

21 MR. SCHROEDER: Q. Dr. Smith, you're being handed
22 what has been marked as Exhibit 1 to your deposition. Do
23 you recall receiving a subpoena for documents in about May
24 of this year in this case?

25 A. Vaguely.

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page 7

1 Q. And did you ever see a copy of what's Exhibit 1?

2 A. I'm not sure if it looked like this.

3 Q. Okay. If you would, take a look at the -- about
4 the third or fourth page in. It says Documents Requested.

5 A. Yes, I see that.

6 Q. Do you see that? Okay. Have you seen that
7 before, Doctor?

8 A. I don't recall.

9 Q. What I want to do is walk through the list and see
10 if what you've produced to us is responsive to what we asked
11 for. Did you maintain a file in connection with your work
12 in the Falise case?

13 A. Yes, I did, although it was frequently disrupted.

14 Q. What do you mean by that, Doctor?

15 A. I mean that when I had articles that were
16 pertinent to this case, I might also on various occasions
17 use them for other purposes, so there was not a separate
18 highly-organized file.

19 Q. Do you mean by that, sir, that there may be
20 materials that you at one point in time relied on or used in

21 connection with the Falise case that were not contained in
22 your file?

23 MR. FORESTA: I object to the form of the
24 question.

25 THE WITNESS: I don't have a file with all the

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1 material that I rely on in the sense that there are many
2 hundreds and thousands of publications that relate one way
3 or another to this topic, and I don't have a separate file
4 on them.

5 MR. SCHROEDER: Q. Okay. To the extent that you
6 did collect information specific to this case, did you
7 maintain a physical file?

8 A. No. Only on the correspondence. For example,
9 when I prepared my report, I had a collection of articles
10 that I reviewed and to which I make reference. But they are
11 no longer a separate file.

12 Q. Okay. At any point in time were they part of your
13 file?

14 A. Only while I was preparing my report.

15 Q. Okay. Did you at some point in time remove them
16 from your file before today's deposition?

17 A. No, not really. At various points I was accessing
18 articles and using them for other purposes, so they ceased
19 to be a separate file after I wrote my report. Quite soon
20 thereafter.

21 Q. Okay. Just so that I understand, Doctor, is it
22 your testimony that at various points in time you had
23 documents in your file that you may have accessed for other
24 matters you were working on and they were removed from your
25 file so that you could use them on something else you were

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page 9

1 doing?

2 A. Correct. In particular, publications. Scientific
3 publications.

4 Q. Okay. Apart from scientific publications, are
5 there any other matters that you removed from your file?

6 A. No.

7 Q. Are you familiar with the materials that were
8 turned over to the defendants in this case in response to
9 the subpoena that's Exhibit No. 1?

10 A. Yes.

11 Q. Okay. The materials that were turned over to the
12 defendants, were they -- did they fully constitute what was
13 remaining in your file, apart from these scientific studies
14 you've testified to that may have been removed from time to
15 time?

16 A. As best I know, although the material was not
17 highly organized. I tried to pull out all that had been
18 sent to me and then that's what was sent forward.

19 Q. Okay. Did you physically go through the file
20 yourself? Or did you direct somebody to do that?

21 A. I did.

22 Q. Item number 2 on the list was all documents upon
23 which you relied in forming and providing your opinions in
24 this litigation.

25 Apart from scientific literature, publicly

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1 available, were all of those documents turned over to the
2 defendants pursuant to the subpoena?

3 A. Yes.
4 Q. Item 3. All documents that you considered and
5 rejected in forming and providing your opinions, including,
6 without limitation, transcripts or recordings of testimony
7 from any deposition, trial or hearing.
8 Were there any of those such documents that you
9 considered as part of your opinion?
10 A. Well, I didn't understand or I don't understand
11 item 3, exactly what it means.
12 Q. All right.
13 A. The wording is --
14 Q. Let me ask you this, Doctor: Did you review any
15 testimony of any of the witnesses in this case?
16 A. Yes.
17 Q. Is your review of that testimony part of your
18 opinion in this case?
19 A. I suppose it depends what questions I'm asked.
20 There's not material in them on which I relied in reaching
21 my opinions.
22 Q. Whose depositions have you reviewed? Or whose
23 testimony have you reviewed?
24 A. You're not now referring to reports? Then I may
25 have been -- I was assuming you were referring to both
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1 reports and deposition transcripts.
2 Q. Let's start with testimony, Doctor. Which
3 testimony, if any, have you reviewed in connection with the
4 Falise case?
5 A. I was sent a deposition transcript of
6 Dr. Karchman.
7 I think the other things are reports. But I --
8 Q. That's fine. I'd like to limit my question first
9 to testimony, so if we could address that. You mentioned
10 Dr. Karchman. Any other testimony in this case that you've
11 reviewed?
12 A. Not that I can think of. Although we might find
13 some as we go through. That's the only one I think of where
14 I've actually got a copy of the actual deposition.
15 Q. Have you reviewed the testimony of a Dr. Jeffrey
16 Harris?
17 A. I've seen material. I'm finding it difficult in
18 my mind to distinguish whether it's testimony or reports.
19 But certainly, there was some reference to Dr. Harris'
20 material in some of the things that I've seen.
21 Q. Do you rely on anything that Dr. Harris did or
22 said in reaching your opinions in this case?
23 A. No.
24 Q. Have you reviewed the testimony of Dr. David Burns
25 in this case?
page 11
page 12
1 A. I don't recall.
2 Q. If you recall during the deposition, will you let
3 me know?
4 A. Okay. Fine.
5 Q. Have you reviewed the testimony of Dr. Albert
6 Miller?
7 A. Again, I don't recall if it was actual testimony.
8 Q. All right. Again, same admonition. If you would
9 let me know if you recall during the deposition at any point
10 in time, let me know.
11 A. (Witness nods head.)

12 Q. And you'll need to answer audibly.
13 A. Yes.
14 Q. All right. Did you review the deposition of --
15 let me ask it this way. Strike that.
16 Doctor, do you recall ever reviewing the
17 deposition testimony of Dr. Thomas Florence?
18 A. Not specifically. Again, these names ring bells
19 with me, and, of course, this goes back over a year.
20 Q. Yes, sir.
21 A. And but I -- I remember some of these names, but
22 not precisely without looking through these cover letters
23 and other things what was sent to me.
24 Q. Is it fair to say, Doctor, that presently you have
25 no recollection of having reviewed Dr. Florence's testimony

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1 in this case?
2 A. I do not specifically recall reviewing it. That
3 is correct.
4 Q. Expert reports. You've reviewed reports of other
5 experts in this case, correct?
6 A. Yes.
7 Q. All right. Whose other expert reports have you
8 reviewed? And then I'm going to ask you whether or not you
9 rely on anything in those reports to form your opinions. So
10 let's start, if you would, please, sir, with whose reports
11 have you actually reviewed.
12 A. I was sent a binder of reports which I have here
13 (indicating).
14 Q. Okay. And those were expert reports of experts of
15 the plaintiff in this case? Correct, sir?
16 A. Correct.
17 Q. All right. Did you review that, all the expert
18 reports, in that binder?
19 A. No.
20 Q. Whose reports did you actually review?
21 A. Well, it's quite a long time ago. I scanned
22 various ones. I didn't in detail go through any.
23 Q. Okay. Presently, do you have any recollection of
24 which reports you reviewed in any detail?
25 A. No.

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1 Q. All right. Do you rely on any of the information
2 in any of those reports for your opinions in this case?
3 A. No.
4 MR. FORESTA: Well, Tom, just can I note for the
5 record that in that compilation is a copy of Dr. Smith's
6 report. Excepting Dr. Smith's report?
7 MR. SCHROEDER: All right. That's a fair
8 statement.
9 Q. Excepting your report. And what I would like to
10 do, Doctor, if I can hand -- have that, without attaching it
11 to the deposition, let me go and read the names of the
12 doctors who are on here, and ask you, Doctor, if indeed
13 these are the people whose reports are contained in this
14 volume. It's Dr. Abraham, Dr. Benowitz, Dr. Brody,
15 Dr. Cummings, Dr. Egilman, Dr. Gamsu, Dr. Kelsey, Dr. Miller
16 and Dr. Allan Smith, which is you, correct?
17 A. Correct.
18 Q. All right. So all of those reports are contained
19 in this volume that you had in your possession, correct?
20 A. Correct.

21 Q. And your testimony is that, apart from your own
22 report, you don't rely on any of the other reports in this
23 volume? Correct, sir?

24 A. Correct.

25 Q. All right. Let me dispose of that. Okay.

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1 There's a letter that appears to be with those
2 reports, Doctor, and it doesn't appear to be a letter that
3 has been produced to us. At least that I recall. Can I see
4 that, please?

5 A. I don't -- I think it was an accident that it was
6 with that report.

7 MR. FORESTA: May I see the letter?

8 MR. SCHROEDER: Sure.

9 THE WITNESS: I think you had asked me what
10 reports I'd reviewed. I've also reviewed a report by
11 Dr. Mundt, a report by Peter Lee.

12 MR. SCHROEDER: Q. Do you have the report of
13 Dr. Mundt that you reviewed?

14 MR. FORESTA: You don't recall having a copy of
15 this letter?

16 MR. SCHROEDER: Not that I recall, no.

17 MR. FORESTA: I'll make you a copy of it at a
18 break.

19 MR. SCHROEDER: Okay.

20 MR. FORESTA: I thought I saw it in the materials.

21 MR. SCHROEDER: Q. Those are the two reports you
22 have?

23 A. Correct.

24 Q. Are there one or two? Two of them? Okay.

25 A. One is labeled supplement.

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1 Q. So you've reviewed Dr. Mundt's reports dated May
2 of 2000 and June of 2000? Is that correct, sir? On the
3 front? On front page is a date.

4 A. Correct. I think the June supplement I just
5 scanned. I reviewed the May 15 report.

6 Q. Okay. And have you made any notes in any of these
7 reports?

8 A. No.

9 Q. Have you highlighted any portion of these reports?

10 A. I've got a few markings, but no, I haven't really
11 highlighted.

12 Q. All right. What you've done is you've placed
13 sticky tabs on this report and written on the sticky tabs?
14 Correct?

15 A. Sometimes.

16 Q. Okay. And you did not produce a copy of this
17 report pursuant to either subpoena in this case, did you?

18 A. I don't recall. No, I -- I think that my --
19 reports like that, I assumed that you have and that the
20 correspondence would refer to what was sent to me, so --

21 Q. You understand, though, don't you, sir, that if
22 you've made comments on reports of the defendants' experts
23 that would be of interest to the defendants in this case?

24 A. I understand that. Those -- those stickies were
25 put on on the plane two nights ago, so --

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1 Q. Okay.

2 A. Maybe a bit more than that. Five days ago.

3 MR. SCHROEDER: We're going to need to get a copy
4 of this.
5 MR. FORESTA: Um-hmm.
6 MR. SCHROEDER: We're going to get to the second
7 subpoena in a minute, but this is responsive to the pending
8 subpoena prior to today's deposition.
9 MR. FORESTA: Right. And as he said, he made
10 markings five days ago.
11 MR. SCHROEDER: I understand.
12 MR. FORESTA: And he returned to town yesterday.
13 MR. SCHROEDER: Okay.
14 Q. Is that the first time you reviewed Dr. Mundt's
15 report, five days ago?
16 A. I'd skimmed certain parts before, but that was the
17 first time that I reviewed it as such, yes.
18 Q. Okay. Have you done the same thing to his
19 supplemental report?
20 A. No.
21 Q. Have you read his supplemental report?
22 A. No, I just skimmed through.
23 Q. Do your opinions in this case rely on anything
24 contained in Dr. Mundt's report?
25 A. No.

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1 Q. Are there other reports that you've reviewed?
2 A. No. I indicated that I'd reviewed a report by
3 Peter Lee. Also, I think there was a report with
4 Dr. Karchman's deposition. And I was sent a report by
5 Dr. Delaney -- or is it Marla?
6 Q. It's Dr. Delaney. All right. And any others,
7 Doctor?
8 A. Dr. Goldstein and Dr. Von Berg.
9 Q. Have you reviewed the reports of Drs. Delaney,
10 Goldstein or Von Berg?
11 A. No.
12 Q. It's fair to say, then, that your opinion does not
13 rely on anything contained in those reports? Correct?
14 A. Correct.
15 Q. Do you intend to review any further materials --
16 strike that.
17 Are those all the reports you've reviewed, then?
18 What you've testified to?
19 A. I think so. Well, as I sit here, I can't recall
20 others. I have, as you know, been traveling a lot, and a
21 lot of this work goes a way back, but I'm trying to recall
22 the best I can.
23 Q. All right. Again, if you recall any other reports
24 during the course of this deposition, will you let us know?
25 A. Yes.

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1 Q. All right. Do you intend to review any other
2 reports before you testify in this case?
3 A. I have no plan to do so.
4 Q. Okay. Do you plan to testify at trial in this
5 case?
6 A. No. I hope you settle.
7 Q. And apart from your hope, Doctor, what other
8 reason do you have that you would believe that you would not
9 be testifying in this case at trial?
10 MR. FORESTA: Just note my objection to the form
11 of the question.

12 THE WITNESS: Well, I -- I don't quite
13 understand. I guess if it doesn't settle, I'll be
14 testifying if I'm asked to.

15 MR. SCHROEDER: Q. Okay. Have you been asked yet
16 to testify at trial?

17 A. Not formally. The implication is that I would be,
18 but I don't know what the timetable is, when and what.

19 Q. All right. Doctor, let's return to Exhibit No. 1,
20 if we can, and walk through the rest of the items on this
21 list.

22 Item number 4 is -- well, you can read item number
23 4. It's essentially all correspondence that you may have --
24 and other documents you may have shared with any other
25 expert on the plaintiffs' side of this case.

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1 Are there any such documents that are responsive
2 to number 4?

3 A. No. I think the expert report volume might be,
4 but I've given you that.

5 Q. Okay. Have you shared any materials of your own
6 that emanated from your office with any other expert
7 testifying for the plaintiff in this case?

8 A. No. Only the report.

9 Q. All right. Have you directly shared your report
10 with any other expert?

11 A. No.

12 Q. Item 5. Are there any articles or publications
13 not publicly available that form the basis of your opinions
14 in this case?

15 A. No.

16 Q. That is, are there any items that -- let me ask it
17 this way: Are there any items that are in press upon you --
18 upon which you rely in this case?

19 A. There is a publication in press that relates to
20 arsenic and cigarette smoking that relates to synergy. I
21 don't rely on it, obviously, as it relates to asbestos and
22 smoking directly, but indirectly it's another article
23 concerning evidence of synergy of an agent with cigarette
24 smoking and causing lung cancer.

25 Q. Does that article discuss in some part, either

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1 discuss or refer to any of the literature on the
2 interaction, if any, between asbestos and smoking?

3 A. I don't think so. If it did, it would just be one
4 sentence. No more.

5 Q. Does that article discuss the concepts of synergy
6 and interaction?

7 A. It -- no. It presents data, not concepts.

8 Q. When will that article be published?

9 A. This year. I'm not sure which month.

10 Q. And it's listed on your new CV? Right?

11 A. Yes, it is.

12 Q. Which item is it on your new CV? They're
13 numbered?

14 A. 144.

15 Q. Thank you. Apart from item 144, are there any
16 other items that are in press upon which you rely in this
17 case?

18 A. No.

19 Q. Item number 6. Are there any documents responsive
20 to item number 6 upon which you rely in this case?

21 A. I don't think any of those things could be relied
22 on.

23 Q. Doctor, are there any that you do rely on?

24 A. No.

25 Q. Thank you. Item number 7. What documents have

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1 you reviewed or considered subsequent to the issuance of
2 your report in this case? Apart from Dr. Mundt's report and
3 Dr. Karchman's deposition, what other items have you
4 reviewed after you had issued your report?

5 A. Peter Lee's report. And the scanning I did of
6 some material in the volume of plaintiff experts' reports.

7 Q. Had you reviewed any of the plaintiffs' experts'
8 reports before they were produced in this case?

9 MR. FORESTA: I just object.

10 MR. SCHROEDER: Q. In other words, were you
11 involved at any point in time in seeing or reading those
12 reports prior to their production in this case to the
13 defendants?

14 MR. FORESTA: That assumes he knows when they were
15 produced to the defendants in this case.

16 MR. SCHROEDER: I'll represent to you, Dr. Smith,
17 they were produced on or about September 1st, 1999.

18 THE WITNESS: No, I see that Dr. Nicholson is not
19 in this document.

20 I -- I did see some material prepared by
21 Dr. Nicholson in advance of writing my report. And I think
22 I made reference to that. But I have thought -- forgive me,
23 I thought that was actually in this binder. It's not. And
24 so I did have some material earlier from Dr. Nicholson.

25 MR. SCHROEDER: Q. You reviewed drafts -- excuse

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page 23

1 me. You reviewed drafts of Dr. Nicholson's report before it
2 was produced? Isn't that correct?

3 A. Yes.

4 Q. Okay. And it was produced on or about September
5 1st, 1999? Correct?

6 A. I don't recall.

7 Q. And you commented on drafts of Dr. Nicholson's
8 report, did you not?

9 A. I -- I think so.

10 Q. Okay. What other documents, if any, did you rely
11 on or -- strike that.

12 What other documents, if any, did you review after
13 you issued your report, apart from what you have just told
14 us about?

15 A. Well, I think we've covered them. Certainly, the
16 main one is I reviewed Dr. Mundt's report, and I think we've
17 covered all the other things.

18 Q. Do you have a copy of Dr. Nicholson's report as
19 part of your file in this case?

20 A. Well, presumably it's somewhere. I haven't got it
21 here.

22 Q. Okay. Is there more of your file that is not here
23 with us today?

24 A. Well, I hope not. I -- my file on this has --
25 became quite disorganized over the course of one year, with

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1 moving various things, and I -- I obviously have seen that
2 report and I don't have it here. And I guess that I didn't

3 re -- well, it may be actually -- let me just have a look in
4 here.

5 There is some material in here, such as this Table
6 7 that was I think draft work of Dr. Nicholson. And yes, I
7 do have here a draft of his report, I think it is in the
8 material I submitted. In fact, there's several pieces here.

9 Q. You have various drafts in your file, but not his
10 final report? Isn't that correct?

11 A. That could be. His final report was about
12 September 1? Is that --

13 Q. That's correct.

14 A. -- what you mentioned? I think these are in
15 chronological order. Well, at the time -- you know, I just
16 simply don't recall. I have his material from his drafts
17 here. In terms of the final report, I don't know. I don't
18 recall.

19 Q. Is there anything in Dr. Nicholson's report upon
20 which you relied on in this case?

21 A. Well, I used some of the material as starting
22 points to identify certain studies which ones then I thought
23 would be important, I looked up. To that extent, I was to
24 save time starting with the articles that he'd collected.
25 In certain instances.

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page 25

1 Q. Are there any conclusions reached in
2 Dr. Nicholson's report upon which you rely in this case?

3 A. No.

4 Q. All right. Do you maintain, Doctor, with you in
5 your office or at home, copies of your deposition
6 transcripts?

7 A. No.

8 Q. Do you have copies of any deposition transcripts
9 from any of the cases in which you've appeared?

10 MR. FORESTA: Are you just asking about deposition
11 transcripts? Not trial transcripts?

12 MR. SCHROEDER: Well, we can expand the scope.
13 Deposition or trial transcripts.

14 MR. FORESTA: I want to make sure the witness
15 understands.

16 MR. SCHROEDER: Q. Let me make it even broader,
17 Doctor. Is there any recorded testimony given by you that
18 you have a copy of in any form in your possession?

19 A. I don't know. Before I testify in court I usually
20 receive a copy of my deposition relating to the case, which
21 I may read. But after testifying, the material is all
22 discarded. And whether somewhere in my material I still
23 have transcripts of depositions, I don't know.

24 But I don't keep them as a file.

25 Q. Okay.

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1 A. My intent is to discard them after testifying. I
2 have no reason to keep them.

3 Q. Did you give any copies of any of your prior
4 testimony to counsel for the plaintiffs in this case?

5 A. No.

6 Q. Have you testified before in administrative or
7 regulatory proceedings? I'm distinguishing courtroom
8 proceedings from regulatory or administrative proceedings.
9 And I want to ask you about the regulatory or
10 administrative.

11 A. I don't think I've testified formally in the U.S.

12 concerning regulatory decisions.

13 Q. Have you testified in any other country on
14 regulatory decisions?

15 A. Not -- not in legal testimony. There was legal
16 testimony that related to Agent Orange that was for -- I
17 gave it in the U.S., but it was for national litigation
18 issues I think in Australia. Quite a few years ago.

19 Q. On whose behalf did you give testimony in the
20 Agent Orange matters?

21 A. Well, in that instance, I think it was Monsanto
22 Chemical Company.

23 Q. Do you have a copy of that testimony?

24 A. I'm not sure. There was a seven-volume report
25 produced by the judge, and I know it made reference to my
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1 testimony. But I'm not sure I still have a copy of that.
2 It wasn't a transcript of my testimony, though. It was a
3 compilation of the basis for whatever decisions he made.

4 Q. All right. If I want to find a copy of that, who
5 would you suggest we contact to be the most likely person to
6 keep a copy of that?

7 A. Well, the Australian Embassy. Monsanto Chemical
8 Company might. It --

9 Q. Who was your contact?

10 A. I don't recall. It was an attorney for Monsanto
11 Chemical Company.

12 Q. What was the name of the matter?

13 A. Again, I don't recall. It was Agent Orange and
14 its effects on veterans from Vietnam.

15 Q. When did you testify? What year?

16 A. It was in the '80s, as I recall. But I don't -- I
17 can't be more specific. I know it was after I came to
18 Berkeley, so it would be after '83, I think, before 1990.

19 Q. And you in that testimony discussed
20 epidemiological concepts?

21 A. Epidemiological studies.

22 Q. All right. And this was -- this was in what
23 country? Australia?

24 A. Yes. There was a deposition in the U.S. and then
25 I testified in Australia.

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1 And there was also testimony I gave in New York
2 concerning the Brooklyn Navy Yard facility. That was heard
3 by an environmental law judge. I don't know if that comes
4 under your question. It did relate to issuing a permit or
5 otherwise for an incinerator.

6 Q. Did that deal with asbestos?

7 A. No.

8 Q. What were the issues there, briefly stated?

9 A. Emissions from an incinerator. The main focus was
10 on dioxins.

11 Q. And what year was this?

12 A. It would be again in the '80s, I think.

13 Q. Can you be more specific than that, please,
14 Doctor?

15 A. No.

16 Q. All right. Any other regulatory or administrative
17 testimony that you've given in oral or written form?

18 A. You mean in legal proceedings? No. That I
19 recall, no.

20 Q. Have you ever appeared in any state or federal

21 body in the United States for the purpose of giving opinions
22 on the relationship between asbestos and disease?

23 A. Can I hear the first part of your question again?

24 Q. Sure. Have you ever appeared in any state or
25 federal body in the United States for the purpose, apart

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1 from courts, for the purpose of giving opinions on the
2 relationship between asbestos and disease?

3 A. No. I -- there was the case somewhere in the
4 country. But in your wording, you said not court. And it
5 was in -- the hearing was in a court, so other than that,
6 no, I have not testified formally to government agencies
7 concerning asbestos.

8 Q. Okay. You've never testified to a legislative
9 body in the United States, whether state or federal, about
10 the relationship between asbestos and disease?

11 A. No.

12 Q. And you've never testified in a legislative body
13 in the United States about the relationship between smoking
14 and disease?

15 A. I have not.

16 Q. Okay. Now, you have testified, have you not, sir,
17 in numerous court proceedings in the United States, correct?

18 A. Yes.

19 Q. And is it your testimony, sir, that you have in
20 your possession no copies of any of your transcripts from
21 any of your testimony in your court proceedings in the
22 United States?

23 A. Well, that's not what I said. I don't keep them.
24 My intent is to discard them. As far as I know, they're all
25 discarded after I go to court. I don't -- I don't like

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1 keeping voluminous paper around.

2 Q. Okay.

3 A. So -- but --

4 Q. Did you make any effort in this case to determine
5 whether you have any copies of any testimony you gave in any
6 court proceedings in which asbestos exposure and/or alleged
7 asbestos diseases were at issue?

8 A. Well, my recollection is telling -- who I'm not
9 certain offhand -- that I didn't have such things, but that
10 they presumably could be found by them in the Bay Area from
11 various attorneys' offices.

12 I don't -- I think my assessment at the time was
13 that I didn't have any, and that's what I told them.

14 Q. Sir, my question was did you make any effort to
15 determine whether in fact you had any such copies in your
16 possession?

17 A. I don't recall going and looking for what I didn't
18 expect to find. I -- I was fairly busy. I knew if I did
19 find any, it would only be one or two, and that they could
20 better be found or listed or identified in relationship to
21 court proceedings in the Bay Area where predominantly the
22 testimony had been given.

23 Q. Who are the lawyers with whom you have worked?
24 That is, who has retained you in asbestos-related
25 litigation?

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1 A. I think at some point I produced a list of -- or a
2 list was produced way back. Or maybe I'm mixing up cases.

3 They include -- I can from memory list some of the
4 firms here in the Bay Area especially.

5 Q. Please, sir.

6 A. The Brayton firm. Kazan. Handley. Wartnick.
7 Robinson. Grell.

8 Q. Gorel?

9 A. G-R-E-L-L. Those are the ones that come to mind.

10 Q. And the names you gave me, sir, are names of
11 lawyers you know to represent plaintiffs in personal injury
12 asbestos litigation? Isn't that correct?

13 A. I know that is. What else they do, I don't know.
14 I know they represent or have represented plaintiffs.

15 Q. How many times have you testified, Dr. Smith, in
16 deposition or trial in connection with asbestos-related
17 litigation?

18 A. When you say or, you mean and? Summing the two?

19 Q. Yes.

20 A. I don't know. I know I've testified more than 100
21 times in court, and I've sometimes roughly thought, well,
22 it's probably twice that for depositions. But I have no
23 counts of it.

24 Q. In connection with -- well, let me strike that.

25 Is it fair to say, then, you've testified more

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1 than 300 times in connection with depositions and court
2 proceedings?

3 A. Yes. If you count it like that.

4 Q. All right.

5 A. I --

6 Q. And in connection with that testimony, what
7 percentage of the time were you testifying on behalf of a
8 person who claimed to have been injured by asbestos?

9 A. The way you word it, I'm not sure of all the
10 intervening wording, but they were all plaintiffs' cases. I
11 have not been asked to testify by defendants on asbestos
12 cases.

13 Q. When did you first begin testifying in asbestos
14 litigation?

15 A. Soon after I came to California, around about
16 1984.

17 Q. What percentage of your work, Doctor, is in
18 connection with litigation-related activities?

19 A. It varies. But roughly 10 to 15 percent of my
20 work time.

21 Q. And I mean not just the testifying part. I am
22 including in that any time you spend as part of your daily
23 activities or into the evening, if you're traveling back and
24 forth to New Zealand, related to litigation. Reading
25 reports, providing reports, reviewing medical records,

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1 whatever you may do, what percentage of your time is devoted
2 in some aspect to litigation?

3 A. Well, I wish I was spending more of my time
4 traveling backwards and forwards to New Zealand, but I
5 answered assuming that's what you meant.

6 Q. All right. Have you ever given testimony in cases
7 involving the Johns-Manville Trust?

8 A. Probably.

9 Q. And your testimony would have been essentially
10 that asbestos manufactured by the Manville Company caused
11 the injury to the plaintiff in that case? Correct?

12 MR. FORESTA: Object to the form of the question.
13 THE WITNESS: No.
14 MR. SCHROEDER: Q. Have you ever given testimony
15 in a case where it was your testimony that the plaintiff was
16 not injured by asbestos?
17 A. No, I --
18 MR. FORESTA: Just wait for the question. Did you
19 finish the question, Tom?
20 MR. SCHROEDER: Yes.
21 THE WITNESS: No. When I'm asked to go to court
22 by plaintiffs' attorneys, that is not my opinion on those
23 cases.
24 MR. SCHROEDER: Q. Okay. And you've testified in
25 cases involving the Trust, correct?

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1 A. Well, I don't pay attention to that. I assume
2 that there are cases in which the Manville Trust is or was
3 part of the litigation.
4 Q. And it was your opinion in those cases that
5 asbestos injured the plaintiff?
6 A. If I was asked to testify at court and did so,
7 that would be correct.
8 Q. Your hesitation, if any, with my last series of
9 questions was that related to the fact that -- was it
10 related to whether or not you gave specific testimony about
11 any specific defendant?
12 A. Well, it was --
13 MR. FORESTA: Just note my objection to the
14 question.
15 MR. SCHROEDER: That's fine.
16 MR. FORESTA: You can answer, if you understand
17 it.
18 MR. SCHROEDER: You can answer, Doctor.
19 THE WITNESS: It was that it's not products that
20 cause asbestos disease; it's the inhalation of asbestos
21 fibers. So as soon as you mention John Mansville products,
22 then I have problems.
23 MR. SCHROEDER: Q. Okay. Let me see if I can fix
24 that, then.
25 Doctor, is it fair to say that you've testified in

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1 cases on behalf of persons who you testified were injured by
2 asbestos where Johns-Manville Trust was one of the
3 defendants in the case?
4 A. I suspect that is correct. I don't pay attention
5 to that aspect as to who the defendants are.
6 My testimony relates to whether or not asbestos
7 was involved in disease causation, not the products or the
8 companies or whoever was involved.
9 Q. Okay. Your present hourly rate is how much,
10 Doctor?
11 A. \$400.
12 Q. When you started this case, it was \$350? Isn't
13 that correct?
14 A. Probably.
15 Q. Do you charge the same amount in this case as you
16 do for plaintiffs cases?
17 A. Yes. Well --
18 MR. FORESTA: Well --
19 THE WITNESS: You mean individuals?
20 MR. SCHROEDER: Q. Personal injury cases?

21 A. Yes.
22 Q. When you testify in asbestos personal injury
23 litigation, do you testify about -- or strike that.
24 When you testify in personal injury asbestos
25 litigation, have you given opinions with respect to asbestos
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1 causing mesothelioma?
2 A. Yes.
3 Q. Have you given opinions with respect to asbestos
4 causing asbestosis?
5 A. Yes.
6 Q. Have you given opinions as to asbestos causing
7 lung cancer?
8 A. Yes.
9 Q. Have you given opinions as to whether asbestos
10 causes pleural plaques or pleural thickening?
11 A. Yes.
12 Q. And it's fair to say, is it not, Doctor, that it
13 is your opinion that asbestos causes all of those
14 conditions?
15 A. Yes.
16 Q. Have you reviewed in this case any documents from
17 the Johns-Manville Personal Injury Settlement Trust?
18 A. Well, I've told you as best I can recall what I've
19 reviewed, and I don't think any of these are such documents.
20 Q. You've not reviewed any internal policies of the
21 Trust, the plaintiff in this case, have you, sir?
22 A. No.
23 Q. You've not reviewed any testimony of Mr. David
24 Austern, have you?
25 A. I don't recall if I did.

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1 Q. You haven't -- you don't recall, do you, sir,
2 reviewing the testimony of either Ms. Hauser or Ms. Smith?
3 A. No.
4 MR. SCHROEDER: Do you need a break? Or are
5 you --
6 THE WITNESS: Well, I was thinking, we've been
7 going about an hour, haven't we? I would just like to get
8 some coffee.
9 MR. SCHROEDER: If at any time you want to take a
10 break, you let me know. If this is a good time, we'll take
11 a break.
12 THE WITNESS: All right.
13 THE VIDEOGRAPHER: Do you want to take a break?
14 MR. SCHROEDER: Yes.
15 THE VIDEOGRAPHER: Going off the record. The time
16 is 10:03.
17 (Brief recess in proceedings - 10:03 to 10:15 am.)
18 THE VIDEOGRAPHER: We're back on the record. The
19 time is 10:15.
20 MR. SCHROEDER: Q. Dr. Smith, in connection with
21 Exhibit No. 1, you then produced a number of pages of
22 materials to the defendants in this case in response,
23 right? This is the subpoena for the materials.
24 A. Yes.
25 Q. What I'd like to do is just mark for the record a
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1 copy of what you've produced. I see you have a second copy
2 here, it looks like. Is that an extra copy?

3 MR. FORESTA: Yes, it is.
4 MR. SCHROEDER: Can we mark that as part of the
5 record?
6 MR. FORESTA: That's what it's there for.
7 MR. SCHROEDER: Okay. Let's mark this as
8 exhibit -- Smith Exhibit 2.
9 (Exhibit 2 marked.)
10 MR. SCHROEDER: Actually, there's a cover letter
11 on the top that is not part of your file because this is
12 actually a letter to me. So if you don't mind, let's put
13 the sticker on the next page.
14 Q. Dr. Smith, can you confirm for us that what's been
15 marked as Exhibit No. 2 is a copy of the materials you've
16 produced in response to the subpoena that's listed as
17 Exhibit No. 1?
18 A. I believe it is.
19 (Exhibit No. 3 marked.)
20 MR. SCHROEDER: Q. I'm going to hand you,
21 Dr. Smith, what's been marked as Exhibit No. 3, which is the
22 notice of your deposition today in this case. Have you seen
23 that document before?
24 A. I don't recall.
25 Q. If you would, please, sir, flip back to the
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1 Schedule A to the subpoena attached to that.
2 MR. FORESTA: You can continue.
3 MR. SCHROEDER: Q. Do you see that page, sir? It
4 says documents to be produced?
5 A. Yes.
6 Q. Have you seen this page before today?
7 A. I don't recall.
8 Q. Has anybody communicated to you the five items
9 that are to be produced on this page prior to today's
10 deposition?
11 A. I don't recall.
12 Q. The materials that you have testified to already,
13 do they now constitute your file in this case? And by that,
14 I mean such that there are no other materials upon which you
15 rely, apart from the scientific articles?
16 A. That's my understanding, that's what I've tried to
17 do.
18 Q. Okay. So item number 1, it's your testimony that
19 you now have, apart from the scientific articles themselves,
20 produced to us the materials that constitute your file in
21 this case?
22 A. Correct.
23 Q. And apart from the scientific articles themselves,
24 you have produced to us documents, all the documents upon
25 which you intend to rely in forming and providing your
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1 opinions in this case?
2 A. Correct. Correct.
3 Q. And apart from what you've testified to already,
4 there are no other documents that you considered and
5 rejected in forming your opinions in this case?
6 A. Well, I don't quite understand that statement.
7 There are no other documents that I considered and relied
8 on. I don't know quite what the word "rejected" means. My
9 opinion is based on scientific studies and publications.
10 And when it's brought with this word "documents," I don't
11 know quite how to respond, other than they're not pertinent

12 to my opinions.

13 Q. Are there any documents that you reviewed apart
14 from scientific studies and rejected them such that they're
15 not part of your file in this case? Do you understand that
16 question?

17 MR. FORESTA: Note my objection to the form.

18 THE WITNESS: I don't quite. I presume you mean
19 things that I considered and decided weren't pertinent to my
20 opinions and then I discarded.

21 MR. SCHROEDER: Q. Yes.

22 A. I -- I don't know quite how to answer that. I --
23 the answer is I don't base my opinions on documents to start
24 with, so whether I have any that I've discarded, I don't
25 know.

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1 Q. You've brought with you today a copy of your
2 current CV? Correct?

3 A. Yes.
4 (Exhibit 4 marked.)

5 MR. SCHROEDER: Q. Can you confirm that Exhibit
6 No. 4 is a copy of your current CV?

7 A. It is.
8 (Exhibit 5 marked.)

9 THE WITNESS: But that's not, of course.

10 MR. SCHROEDER: Q. Okay. And can you tell me,
11 Exhibit No. 5 is what was produced to us in this case with
12 your -- with your report. That's not current, is it?

13 A. No.

14 Q. When was the last time Exhibit No. 5 was current?

15 A. I don't know. The publications go up to the '80s.

16 Q. So your --

17 A. This is --

18 Q. Exhibit No. 5 --

19 A. This is a historic document.

20 Q. I understand that, sir, and that's what was
21 produced to us and represented to be your current CV.

22 A. I -- I'm sorry. I mean I didn't -- it must have
23 come from the office of somebody who thought it was
24 current. I didn't, obviously -- I don't think I have a copy
25 of this.

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1 Q. Well, in fact, it contains your testimony attached
2 to it up to 1999, does it not? Is that correct?

3 A. It's -- yes, there is a page concerning testimony
4 that's been attached to it. I wouldn't say -- the CV
5 doesn't contain that, it's been stapled on the back of it.

6 Q. Okay. And the CV that was produced to us in
7 connection with your report, Exhibit No. 5, contains 72
8 publications of yours. Correct?

9 A. Correct.

10 Q. And presently on your CV that is now Exhibit No.
11 4, which is current, you have 145 publications credited to
12 your name. Correct?

13 A. Listed, yes.

14 Q. Okay. What I'd like for you to do, sir, is to go
15 through Exhibit No. 4 and circle for me the publications you
16 have authored contained on your list there of 145 that you
17 believe you rely upon in any form in connection with the
18 rendering of any opinion you may give in this case.

19 A. Well, that sounds of a very broad question to me.
20 This represents my scientific publications that relate to my

21 research and experience, and I do rely on my epidemiological
22 understanding, research and experience. And in that sense,
23 all of them.

24 Q. All right.

25 A. But the way you worded it, it seemed extremely

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1 broad.

2 Q. Are there -- do you intend to rely upon any of the
3 publications you have authored in connection with opinions
4 you give in this case?

5 A. I don't know how one relies on one's own
6 publications. What I'm thinking of is there's an article in
7 there where I, for example, considered synergy between
8 asbestos and smoking, but I don't rely on my articles in
9 that sense. I rely on the understanding and experience I've
10 obtained in the course of doing that work. But if you mean
11 are there any facts in my publications that I use to, for
12 example, reach opinions expressed in my report, then answer
13 to that is no.

14 Q. All right. I would like for you, sir, to -- to
15 circle on your current CV -- and we can do this at a break
16 if it's more convenient -- those articles that you've
17 authored that concern issues of asbestos and disease,
18 smoking and disease, or asbestos and smoking and disease. I
19 would like to capture all three of those.

20 So what I mean is, for example, if you have an
21 article that relates to dioxins and it's not something that
22 the article does not address asbestos or smoking, then I
23 don't want you to tell me about that one. I want you to
24 show me what you have written that in your view relates to
25 asbestos, smoking and/or their combination with respect to

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1 disease. Do you understand that?

2 A. Well, not quite. You mention dioxin. What if the
3 article is about a study in which we also collected smoking
4 data but it wasn't the primary topic of the study?

5 Q. I would like you to identify, first of all, those
6 that are primarily related with the issue of asbestos,
7 smoking and disease.

8 A. That's the focus of the publication?

9 Q. Yes. And then if there are others where you refer
10 to literature on either asbestos or smoking by relationship
11 or something, but that's not the focus of the article, then
12 we can note those separately.

13 A. Then you've omitted about what I was asking you
14 about.

15 MR. FORESTA: Right.

16 THE WITNESS: That is those studies in which we
17 collect and use smoking data but it's not the primary topic
18 of the research.

19 MR. SCHROEDER: That's the second group.

20 MR. FORESTA: That's the second category.

21 MR. SCHROEDER: Q. That's my second group I want
22 you to address. I want two groups. One is primary focus is
23 asbestos or smoking or asbestos and smoking together. In
24 one group.

25 Second group is any article that you may refer or

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1 cite to any literature from the first group but that's not
2 the focus of the article.

3 A. You still misunderstand me. I'm talking about
4 studies which I as principal investigator and director
5 obtained from the participants, the patients, and so forth,
6 smoking information. But the effects of cigarette smoking
7 was not the primary focus of our research.
8 It's --
9 Q. Put those in the second group.
10 A. Okay.
11 Q. And I would ask you if you you can, if we can do
12 this at a break it might be more convenient. And then you
13 can just mark them and then we'll come back and talk about
14 them, rather than spend the time now going through them all.
15 MR. FORESTA: Recognizing that I think there isn't
16 any 100 percent understanding between Dr. Smith and you as
17 to what you want, we'll try to do that at the break. And
18 there may be a situation where we clarify his understanding
19 when you ask him specific questions.
20 MR. SCHROEDER: Q. But you understand generally,
21 sir, that what I want in the first category is articles that
22 primarily relate to asbestos, smoking or the combination of
23 the two?
24 A. I understand that part.
25 Q. And then the second group, there may be reference
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1 or somehow asbestos and smoking individually or combined may
2 be mentioned, but that wasn't the primary focus.
3 A. No, you still don't understand me.
4 MR. FORESTA: Do you have --
5 THE WITNESS: I don't understand.
6 MR. FORESTA: -- a specific example of what you're
7 referring to?
8 THE WITNESS: Well, let's -- we could go to some
9 of the most recent in my mind. For example, we have a study
10 on arsenic and drinking water and lung cancer. In the
11 course of doing that we collect smoking data and interpret
12 it and adjust for it and look for synergy and interaction.
13 But the primary focus of the study is on arsenic. It's not
14 just is that we make reference to other studies or
15 literature.
16 MR. SCHROEDER: Q. Let's make it easy. Let's put
17 both in one category. If they refer to -- if they are what
18 we talked about in the first category or if they are -- if
19 there's any question in your mind as to whether they should
20 be in the first category, put them in the first category.
21 Including what you just talked about.
22 A. Okay.
23 Q. If it references smoking. Okay?
24 A. All right.
25 Q. And we'll do that at a break and then afterwards
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1 we'll see how they come out and kind of go through them.
2 A. You wanted me to do that on the marked copy? Is
3 that correct?
4 MR. SCHROEDER: Yes, sir.
5 MR. FORESTA: Why don't you just hold on to it.
6 Or I'd hold on to it.
7 MR. SCHROEDER: Q. Dr. Smith, finally, do you
8 have in your possession any documents which refer to in any
9 way, apart from your expert report, which refer to in any
10 way the article by Thomas Erren on synergy that appeared in
11 the magazine Epidemiology in 1999?

12 A. It's a scientific journal. No.
13 Q. Did you have any correspondence with any of the
14 authors in connection with that article?
15 A. Yes.
16 Q. And is that correspondence maintained in your
17 office?
18 A. I don't know what you mean by maintained. I've no
19 separate file of it.
20 Q. We asked as item number 5 on today's subpoena that
21 you bring with you your file in connection with any
22 correspondence or other documents which referred to, related
23 or or associated with that article that you mentioned, the
24 Erren article. Did you bring that with you today?
25 A. No.

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1 Q. And you do have such a thing?
2 A. Well, I'm sure there are in my computer and
3 elsewhere correspondence of a professional and confidential
4 nature with a previous student that relates to that
5 publication. I don't rely on any of that material in
6 stating any opinions on this case, nor on that publication.
7 I can tell you about them in general, but it relates to what
8 I regard as material that's not pertinent to my opinions in
9 this case, and is, as I say, correspondence with a student
10 or previous student that I do not wish to produce.
11 Q. I understand that. And you understand that
12 whether or not pertinent to the case is an issue that is
13 decided by someone other than you in this case. Do you not,
14 sir?
15 A. I would be pleased to tell you in general. And I
16 can tell new general what it was about and what some of the
17 issues were, but I have no separate file on that to start
18 with. And, as I say, I don't produce what is sometimes
19 personal correspondence with previous students.
20 Q. Is that material here in San Francisco?
21 A. No.
22 Q. Where is that maintained?
23 A. Well, it's not maintained. I have no separate
24 file.
25 Q. Where --

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1 A. I could probably find some of it on some computers
2 that have e-mail back-up.
3 MR. SCHROEDER: All right. I'm going to ask that
4 that be produced. It was part of the subpoena and we
5 intended to have it here today. It does in our view relate
6 to the issues in this case because, as we know, Erren's
7 article is mentioned in Dr. Smith's report and Erren was a
8 student of Dr. Smith. So we reserve the right, if
9 necessary, to come back and ask any questions we need to on
10 that.
11 MR. FORESTA: I will take your request under
12 advisement. I would just mention that Dr. Smith has said
13 he's perfectly happy to tell you in general what those
14 communications were about. You may be able to explore this
15 issue further and we'll have a better idea of whether or not
16 this is something that ought to be produced in this case or
17 not. But I'll take your general request under advisement.
18 MR. SCHROEDER: We'll get to Erren's article in a
19 little bit and we'll talk about that.
20 Q. What do you understand, Dr. Smith, your role to be

21 in connection with the Falise case?

22 A. I'm a scientist and consultant.

23 Q. What do you understand your role to be in
24 connection with the issues in the case?

25 A. Well, my understanding is that I was asked to

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1 produce a report that addressed certain aspects that relate
2 to the case and that I may be asked to -- or I was also
3 asked to appear for deposition. And I may be asked to
4 testify about some of the opinions I have in court.

5 Q. When were you first retained?

6 A. I don't recall offhand.

7 Q. Okay. If you take a look at the letter. Steve,
8 do you have it?

9 MR. FORESTA: The original?

10 MR. SCHROEDER: Yes. The original letter. Does
11 that refresh your recollection? You made an extra copy?

12 MR. FORESTA: You didn't keep one?

13 MR. SCHROEDER: That's it.

14 MR. FORESTA: Yeah.

15 MR. WAGNER: I have seen that.

16 MR. SCHROEDER: Q. Does that refresh your
17 recollection you were retained on or about July 1, 1999? Is
18 that right?

19 A. Correct.

20 Q. And do you know who recommended you for retention
21 in this case?

22 A. I don't know. There may have been many people.

23 I know that my first contact concerning the case
24 came through the Kazan office.

25 Q. And you -- you know Mr. Kazan to be one of the

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1 lawyers whose asbestos clients are people who claim to be
2 injured by asbestos? Right?

3 A. I -- well, you word it a funny way to me, but --

4 Q. He represents --

5 A. He represents plaintiffs on asbestos cases, and
6 has done so for quite a few years. I'm aware of that, yes.

7 Q. To date, how much have you billed in this case?

8 A. I don't know. I -- I, in driving here this
9 morning after traveling in, realized that I didn't have that
10 information with me. If you wish to have that, I can send
11 it to you.

12 Q. What's your best recollection? Do you have one?

13 A. I don't know.

14 Q. Do you know how many hours you've spent on this
15 case?

16 A. No, not off the top of my head.

17 Q. And I would ask --

18 A. I prefer to give you, if you want that sort of
19 information, the actual figures rather than my -- my memory
20 of what's happened over more than a year.

21 Q. Okay. Can you tell me whether it's in excess of
22 25 hours?

23 A. I would provide you the information. I think it's
24 better than recalling from memory here.

25 Q. You have --

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1 A. Would you like me to fax that to you or something?

2 Q. I would like to --

3 A. I will be leaving the country tomorrow, so --
4 Q. Yes, I would like to know the -- what your current
5 charges to date are.
6 A. Okay. Do you have a card with a fax number on it?
7 Q. I will leave you one.
8 A. Okay.
9 Q. Do you have a staff who worked on this case?
10 A. No. The -- there was some -- my wife helps me
11 sometimes with things like finding articles and stuff like
12 that, but she doesn't work --
13 Q. Is she a scientist?
14 A. -- work at all on the report.
15 Q. Is she a scientist?
16 A. Yes.
17 Q. What is her degree?
18 A. Geography.
19 Q. When you first -- strike that.
20 Do you know what you've been paid over the course
21 of your testimony on behalf of plaintiffs in asbestos
22 litigation since you began testifying?
23 A. No. No.
24 Q. Is it in excess of half a million dollars?
25 A. I don't know. In recent years it's been

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1 approximately one-third of my income, but I don't -- I don't
2 know what a total would be like that. It's varied over the
3 course of the years.
4 Q. Is it fair to say on an aggregate basis it would
5 exceed a half a million dollars?
6 A. I don't know.
7 Q. Can you break it down for us some way so we can
8 get an idea? For example, on an annual basis?
9 A. Well, I -- what I know is as far as income goes,
10 it's roughly 50, \$60,000, in that sort of ballpark, or it
11 has been for the last few years.
12 Q. And you've been testifying since 1984, you said?
13 Is that right? Roughly?
14 A. Correct. Although initially it wasn't very often.
15 Q. When you first were retained in this case, you
16 used as your starting point in terms of which articles to
17 look at drafts of Dr. Nicholson's report, right?
18 A. In the case of asbestosis and pleural plaques,
19 that is correct.
20 Q. Did you conduct any article search process of your
21 own apart from what was in Dr. Nicholson's report?
22 A. Yes. I have files on asbestos, and I was aware of
23 material I've already collected, and I did check with that
24 material around the time that I was working on my report.
25 Q. Okay. Apart from collecting what was in your

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1 files, did you do anything else?
2 A. I don't recall. I don't think so, but I don't
3 recall. I'm often getting articles or having articles
4 obtained from the library, but just precisely at that time
5 what I did, I don't know. I do recall that the starting
6 point on those two topics were Dr. Nicholson's articles and
7 my existing files on asbestos literature.
8 Q. The files that Dr. Nicholson -- strike that.
9 The articles that Dr. Nicholson mentions in his
10 report dealing with the issue of asbestosis are articles
11 that deal with a prevalence analysis, are they not?

12 Primarily deal with a prevalence analysis, are they not?
13 A. Primarily, they are cross-sectional studies in
14 nature, if that answers your question.
15 Q. They are not multi-variate or regression analyses?
16 A. That's a mathematical analysis of data. It's not
17 a study design. I wasn't answering that. Some of the
18 studies may or may not have had included in the analysis of
19 them regression or multi-variate analysis. I certainly
20 didn't and do not separate articles or studies by that
21 characteristic.
22 Q. Are you licensed, sir, to practice medicine in the
23 United States?

24 A. No.

25 Q. Are you licensed in any country to practice

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1 medicine?

2 A. Not now, no.

3 Q. When was the last time you were licensed to
4 practice medicine in any country?

5 A. Well, last time I actually did diagnosis and
6 treatment of patients on a routine basis was in 1971. I
7 believe I was licensed long after that, but I don't recall.

8 Q. Okay. Do you have a copy of your current CV? You
9 have a file copy here?

10 Are you board certified in any specialty area?

11 A. No. There is no board certification in
12 epidemiology.

13 Q. Okay. Do you refer to yourself as having a
14 specialty in occupational epidemiology?

15 A. Sometimes. Occupational and environmental
16 epidemiology. Sometimes I make reference to cancer
17 epidemiology. Sometimes to the fact that I've done coronary
18 respiratory disease studies. But when you say how do I
19 refer to myself, it's as a research epidemiologist who
20 studeis in those sorts of areas or done studies in those
21 sorts of areas.

22 Q. You are not board certified in occupational
23 medicine?

24 A. Correct.

25 Q. And you don't see patients and haven't since

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1 1971? Is that correct?

2 A. Only in my research studies.

3 Q. But you don't see them as a doctor seeing patients
4 in a doctor-patient relationship, do you?

5 MR. FORESTA: Object to the form of the question.
6 Go ahead, you can answer.

7 THE WITNESS: Well, I -- I see them as a doctor
8 seeing patients, but I don't -- if I think they need
9 treatment, I refer them to treating physicians.

10 When I say see them as a doctor seeing patients,
11 it's seeing them as a research doctor seeing patients.
12 But --

13 MR. SCHROEDER: Q. You don't see them --

14 A. I may exam them and I may do other things. But if
15 I think they need treatment, I don't get involved with that.

16 Q. You don't see them for the purposes of treatment?

17 A. Correct.

18 Q. You conduct epidemiology studies; is that right?

19 A. Correct.

20 Q. In conducting an epidemiological study where you

21 want to determine relationships between one group of people
22 and another group of people, would it be inappropriate to
23 compare one cohort in which there are people who are
24 diseased and people who are not diseased with a second
25 cohort that contains only diseased people in order to derive

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1 a relative risk?

2 MR. FORESTA: Object to the form.

3 You can answer, Dr. Smith.

4 THE WITNESS: Well, that's a very long question.
5 I guess I'd need to see an example of what you're talking
6 about. But in general, in cohort studies, we don't do that,
7 but one could if done appropriately make valid inference
8 from something like that. It depends on what was done.

9 MR. SCHROEDER: Q. To conduct an appropriate --
10 strike that.

11 To conduct a valid epidemiological study, you
12 would want to compare -- if you're going to compare cohorts,
13 you want to compare one cohort, some of whom are diseased
14 and some of whom are not, with another cohort, some of whom
15 are diseased and some are not, in order to determine what
16 the risk relationships may be? Is that a fair statement?

17 A. No. In cohorts, we're trying to compare people
18 who have exposure with people who don't, and then determine
19 what happens to them.

20 Q. Okay. For example, let me give you an example.
21 In some of the Selikoff studies in the area of asbestos and
22 smoking, Dr. Selikoff compares an asbestos cohort with a
23 subset of the American Cancer Society CPS-I study, right?

24 A. Correct.

25 Q. And --

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1 A. Well, when you say compare them, he looks at
2 disease rates in various categories within those two groups
3 and then uses that information, yes.

4 Q. Okay. In order to determine -- strike that.
5 In order to compare disease rates, you need to
6 know how many people are in the population at risk and then
7 how many within that population at risk actually have the
8 disease. Right?

9 A. But you're asking me very loose wording questions
10 a little hard as an expert to answer.

11 What in a cohort study is done is work out person
12 years at risk and then determine rates of disease associated
13 with that, rather than just a count of the number of
14 people.

15 Q. Okay. And in order to make that determination of
16 risk, you have to have, for those who are diseased, a
17 comparison of the larger persons who were exposed so you
18 know what the rate of disease is? Isn't that correct?

19 A. No.

20 Q. Why not?

21 A. Well, you keep talking about disease. We compare
22 in a study like that population groups who are exposed with
23 population groups who are not exposed or various categories
24 of exposure. That is the comparison that is made. Period.
25 That will do.

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1 Q. If I came to you and asked you to conduct an
2 appropriate epidemiological study in your view and I came to

3 you and I said I have 10 people who are diseased and I want
4 you to tell me how they compare in their risk to another
5 study, a cohort, can you do that without knowing the persons
6 exposed from whom the 10 people came?

7 A. Wait. You -- I don't know quite what you're
8 getting at. Presumably some article or study that you're
9 going around.

10 All I can say is that if a group of people have
11 disease, they don't have a risk any longer.

12 Q. Right.

13 A. So --

14 Q. Okay.

15 A. You need more information than that. But you --
16 if you're talking about some specific study, it would be
17 best just to bring it out and let's talk it about --

18 Q. What I want --

19 A. -- because these vague generalizations are hard to
20 answer.

21 Q. I want to talk about some very basic
22 epidemiological principles.

23 A. And they're basically illustrated with real
24 studies, Counsel.

25 Q. And I want to give you a hypothetical situation.

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1 And I want you to tell me whether the hypothetical would be
2 an appropriate approach epidemiologically, and if not, how
3 you need to modify it to make it so. Okay?

4 A. Well, I'll try. But as a scientist, I don't work
5 that way. But I'll try to answer your questions. That's
6 what I'm here for.

7 Q. If I come to you with 100 people and say I have
8 100 diseased people and I want to know what their -- their
9 particular rate of disease from the -- assume they came from
10 a larger cohort of people, and I want to know what their
11 rate of disease is, you would do that by comparing them to
12 another cohort, would you not?

13 A. No. I'd ask what you're talking about.

14 Q. Okay.

15 A. Why would you come to me with 100 people. What
16 are you talking about? What disease? What study? What
17 population? I mean these vague hypothetical things can be
18 very misleading. It's not what I use in teaching or in
19 giving my opinions that relate to science. The abstract
20 leads to misleading information.

21 But what I say, if somebody came with 100 people
22 with disease, I don't know what they -- you mean to start
23 with. What do you mean, come with 100 people with disease?

24 Q. Well, 100 people present with a particular
25 disease. And let's say asbestosis. All right? Clinical

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1 asbestosis. We'll define it later, but let's assume we
2 agree on a definition of clinical asbestosis. And we have
3 100 diseased persons. And they came from a -- a particular
4 group of brake repairmen. Auto industry brake repairmen.
5 Okay? Can you tell me what their -- what the prevalence of
6 disease is in -- for them in their industry, in brake
7 repairmen, without knowing how many are in the cohort that
8 they came from?

9 A. Well, as soon as you say for them, you start with
10 the diseased people. I mean they have the disease, so you
11 just have to ask a different question. If you ask what is

12 the prevalence of disease in a cross-sectional study of a
13 certain group of workers on brakes, that's the question I
14 can understand.

15 Q. Okay.

16 A. Then one goes and surveys that population and
17 finds out the prevalence.

18 Q. And if you want to reach an opinion as to what the
19 prevalence of disease is for those hundred -- for people in
20 the business of those hundred brake repairmen, you need to
21 know how many people are ultimately in the exposed group, do
22 you not?

23 A. Well, you need to do a cross-sectional study of
24 the population you want to answer that question about.

25 Q. All right. And that population would be the

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1 population from whom the hundred came?

2 A. I don't know. It depends what you mean. How did
3 you find these hundred? I don't know how to answer this
4 question. I mean this is -- I indicated your
5 cross-sectional study, you find a group of people and you
6 find out how many have got disease. That's the way you do
7 it. So if you want to know the prevalence in a group of
8 people, you study them.

9 Q. To know their prevalence for the 100, you would
10 need to know how many were in their exposed group, would you
11 not?

12 A. No. You must understand, Counsel, that the
13 hundred don't have a prevalence. They're 100 patients with
14 a disease.

15 Q. To know the prevalence for brake repairmen, you
16 would need to know how many were in the exposed group?

17 A. You would need to do a study of brake repairmen.
18 That would obviously involve numbers.

19 Q. And you would need -- let me put it this way: You
20 can't conduct that study with just the 100, can you?
21 Because they're already diseased?

22 A. It's not a cross-sectional study if you just
23 identify patients with a disease.

24 Q. Okay. Would you agree, Dr. Smith, that the
25 measures of exposures of asbestos in the asbestos literature

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1 dealing with asbestosis and lung cancer are usually poorly
2 measured?

3 A. No. I would say that all these things are
4 relative and the question is poor compared to what? And I
5 think the knowledge about asbestos exposures in a variety of
6 industries and settings and studies mean that the exposure
7 to asbestos is half than better known than exposure to other
8 chemicals that are involved in occupational studies.

9 Q. Job title is by itself not a reliable measure of
10 asbestos exposure, is it?

11 A. It can be, yes. It can be reliable. It depends
12 how it's used and what the inference from it is. And again,
13 it depends on the jobs involved and the titles involved.
14 Sometimes it can be extremely good.

15 Q. Dr. Selikoff once said, did he not, that asbestos
16 exposure does not respect a job title, didn't he?

17 A. It's the sort of thing that he might well have
18 said.

19 Q. Do you --

20 A. By that, I mean that sometimes it's been said that

21 unless somebody's an asbestos miner or asbestos factory
22 worker or an insulator, they don't have occupational
23 exposure to asbestos. But we now know there's large numbers
24 of jobs and occupational titles in which there is asbestos
25 exposure. In that sense, asbestos exposure doesn't respect

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1 a job title.

2 Q. And I appreciate that, Doctor. I would ask you,
3 if you would, because I have a number of questions here. My
4 question was whether or not Dr. Selikoff made that
5 statement.

6 A. Oh, I don't know.

7 Q. Without the explanation, but that's all right,
8 I'll just caution you that we'll be here for a while if you
9 want to --

10 A. I'm not trying to be difficult.

11 Q. -- expand on it.

12 A. I thought you were asking me slightly something.
13 If you're asking me do I recall that Dr. Selikoff made that
14 statement, the answer is no.

15 Q. You have said in one of your articles in 1983 that
16 asbestos exposure was, to use your words, scanty and
17 unreliable. Isn't that correct?

18 A. I don't recall. Could you tell me which article
19 that you're asking about and maybe I can give you a clearer
20 answer.

21 Q. I tell you what, I will have to get it for you at
22 a break. It's the article you wrote in 1983. And since we
23 have your old resume, it won't be hard for us to find.

24 I'll mark that and we'll get that at a break and
25 show it to you.

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1 A. Okay.

2 Q. Would you agree that each individual's exposure to
3 asbestos differs?

4 A. In the sense that all individuals' exposures to
5 any substance differs, yes.

6 Q. Would you agree that variability of exposures can
7 lead to a significant misclassification of risk?

8 A. It depends on the subject and what you're talking
9 about.

10 Q. And it can -- for asbestos workers, is it a fair
11 statement that variability of exposures can lead to a
12 significant misclassification of risk?

13 A. It depends on the context. I can conceive of
14 contexts in which such a statement might be correct.

15 Q. Would you agree, Dr. Smith, that a relative risk
16 of less than 2.0 -- let me strike that.

17 Would you agree, first of all, that relative risk
18 establishes associations but not cause?

19 A. Relative risk is one measure used in epidemiology
20 in studies which produce the evidence on which human
21 causation knowledge is based. One relative risk guesstimate
22 doesn't prove causation upon its own.

23 Q. And the limit of epidemiology is to develop those
24 statistical associations' relationships in order to lead
25 others to do research to determine cause?

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1 A. No.

2 Q. Is it your belief that epidemiology establishes

3 cause?

4 A. It's not my belief. It's my profession. My whole
5 research career has been devoted to establishing causes of
6 disease.

7 Q. And is it your belief that you establish causes of
8 disease based on epidemiology without reference to other
9 experimental data?

10 A. Well, I'd always consider experimental data. But
11 the evidence as to what the causes of disease in humans are
12 inevitably comes from studies of humans. And there are
13 epidemiological studies that experimental work in animals
14 can contribute to the plausibility of what we're finding in
15 humans, but are not required to deduce causation in humans,
16 and indeed, causation in animals may well be different from
17 humans.

18 Q. Is it your belief, Dr. Smith, that you personally
19 can reach a determination of causation based on
20 epidemiological data alone?

21 A. Counsel, I don't have beliefs in this area. I
22 don't know if you would mind, but it's my opinion, if you'd
23 start is it my opinion. When you say belief, it sounds like
24 a religion.

25 Q. I mean opinion.

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1 A. Yes, I thought you do.

2 Q. Is it your opinion, Dr. Smith, that you can reach
3 determinations of causation based solely on epidemiological
4 data?

5 A. Of course. By solely, I, though, want to make
6 clear that epidemiological studies are studies of groups and
7 people -- groups of people in which all sorts of information
8 may be obtained, including biological measures, pathological
9 identification of information and so forth. And it is
10 indeed true that epidemiological studies on their own can
11 deduce causation and even when there are other supporting
12 evidence based on animal or experimental data, that the key
13 information actually comes from the human epidemiological
14 studies.

15 Q. And what I want to be clear about, Doctor, is that
16 it's your opinion that you can reach determinations of
17 causation based solely on epidemiology without toxicological
18 models and without mechanistic models? Is that correct?

19 A. I'm not sure what you mean by toxicological
20 models. If you mean animal studies, yes, that is correct.

21 Q. Okay. Fine. In order to prove -- strike that.
22 In order to establish causation in your opinion,
23 you need a relative risk above 2.0?

24 A. I don't know what you mean by a relative risk. Do
25 you mean one of them or --

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1 Q. It --

2 A. I wouldn't deduce causation in humans based on
3 just one study.

4 Q. If you determine the relative risk for a disease
5 to be less than 2.0, would you give an opinion as to
6 causation, that there is causation?

7 A. I don't know what you mean. You imply that
8 there's again a single relative risk. There are a series of
9 scientific studies, epidemiological studies on which one
10 would deduce causation and there are instances when the
11 overall estimate may turn out that for a particular exposure

12 the -- they are mostly relative risk less than 2 and one can
13 still infer causation. There's no magic number like 2 that
14 determines the scientific inference from epidemiological
15 studies.

16 Q. Would you agree with me, Dr. Smith, that if you
17 have five people, all of whom present with a disease
18 outcome, and you have an agreed-upon relative risk for that
19 disease outcome for their population of one and a half, 1.5,
20 would you agree with me that you -- and that the disease is
21 multi-factorial, would you agree with me that you would not
22 be able to say which of the five had that disease outcome
23 caused by the factor that had the risk of 1.5?

24 A. That's a very long question. You've created,
25 again, a hypothetical. I don't reach opinions based on

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1 numbers like that in the real world.

2 Q. Well, Doctor, I'm entitled under the rules to ask
3 hypothetical questions. So what I would like to do is pose
4 to you a hypothetical question based on situations that may
5 present in the real world.

6 Can you answer the question that I asked you?

7 A. Now, Counsel, I'm here as a scientist and I make
8 my statements of opinion based on my science and
9 professional training. And when you pose certain numbers in
10 a hypothetical, I -- that's not my science. I can try to
11 answer your question as best I can, but you need to give me
12 some substance, some situation, something more than that.
13 The numbers themselves are not what we base inference on.
14 It's overall scientific judgment which includes a large
15 number of different components. And any hypothetical like
16 that trivializes the whole real scientific world in which I
17 work.

18 Q. Well, what I'm asking you about is your opinions
19 as to the ability to use epidemiology as a -- as a premise
20 for reaching conclusions based on any other application.
21 And I want to ask you some fundamental questions about how
22 you view the appropriate use of epidemiology.

23 And my question is designed to -- for you to tell
24 me whether you think epidemiology will allow you to make a
25 determination of causation in a particular individual who

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1 presents with a disease under the circumstances that I've
2 discussed. And that is -- if you want me to, I'll tell you
3 again.

4 A. Well, no, the circumstances you discussed are not
5 real world. And I don't make inference like that on the
6 real world.

7 You know, so it's impossible to answer like that.
8 And I don't make judgments about causation just based on
9 numbers like that. So it has to have a real-world
10 situation. If you give me a hypothetical --

11 Q. All right. Let me give you a hypothetical, then,
12 that's in the real world. You have five people who come to
13 you and they -- they all present with asbestosis, and a
14 claim is made that smoking enhances the risk of asbestosis,
15 whether in fact it was just by radiographic evidence, either
16 way, that smoking enhances the risk of asbestosis.

17 And assume for a minute that the increased risk is
18 1.5. That is, the prevalence of asbestosis among smokers is
19 1.5.

20 And I'm asking you that for any one of those five

21 people -- one other assumption. Those five also smoke.
22 Five smokers who present with asbestosis.

23 For any one of those five, can you tell me under
24 that hypothetical that it was -- that they presented with
25 asbestosis because they smoked?

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1 MR. FORESTA: I'll object to the form of the
2 question.

3 THE WITNESS: Well, firstly, based on
4 epidemiological studies we know that asbestos causes the
5 asbestosis, so that is an essential component.

6 And secondly, based on epidemiological studies, we
7 know that smokers are at an increased risk so they would
8 be -- or come from an underlying cohort that was at
9 increased risk.

10 Then one could consider any one of them and say
11 that if they had never smoked would they have been diagnosed
12 as having asbestosis. And that requires going back in
13 history for those individuals, which you can't do. But one
14 can note that other people who are only exposed to asbestos,
15 it's only a small proportion that get asbestosis. In other
16 words, workers in general are not -- more likely than not to
17 get asbestosis. So my answer would be that, that you can't
18 now take away their smoking history. But one can note that
19 in other workers who have never smoked the proportion that
20 actually get asbestosis is quite low.

21 MR. SCHROEDER: Q. Okay. I appreciate that,
22 Doctor, but with all due respect, I don't think that was
23 responsive to what I was asking.

24 What I'm looking for is whether, if you pick any
25 one of the five, whether you can look at that one person and

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1 say "You got yours because you were one of the ones that had
2 the increased risk because of your smoking."

3 A. I tried to answer your question the best I could.
4 The only way to say it to me is I thought you were asking me
5 if I'm going to say that smoking increased the risk and they
6 got theirs both because of the asbestos and they smoked,
7 I've got to ask myself, well, if they hadn't smoked maybe
8 they wouldn't have got the disease. That seems to me
9 responsive to your question. And then your question is how
10 as a scientist would one answer that. And that's what I was
11 trying to do.

12 Q. Okay. What I'm trying to do is focus on the
13 distinction between working with a group of people and then
14 getting down to a claim-by-claim level, a person-by-person
15 level. And isn't it true that if you have a group of five
16 people who come to you with the disease outcome under the
17 hypothetical I gave you, that you can't pick any one of them
18 and say "You particularly, individual number 1, you got
19 yours because you smoked"?

20 A. I don't --

21 Q. All you can do is look at the individual and say
22 among the five there may have been some portion of the five
23 who got theirs because they smoked? Isn't that fair?

24 A. No. I would say that it's probable in smokers who
25 developed asbestosis that smoking played an effect-modifying

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1 role in the asbestos causing the asbestosis in all the
2 smokers.

3 Now, I can't on one-by-one basis say that's with
4 absolute certainty. I'd say it's a scientific judgment
5 based on the evidence.
6 Q. Well, let's be more precise, then, Doctor. If you
7 assume that smoking increases the risk of the appearance of
8 parenchymal abnormalities in some but not all smoking
9 asbestos workers, isn't it true that --
10 A. I've lost that part there, Counsel. I'm sorry to
11 interrupt.
12 Q. Okay. Isn't it true that your opinion in this
13 case is that smoking increases the prevalence of parenchymal
14 abnormalities? Correct?
15 A. Well, no, I -- it's my opinion that smoking is an
16 effect-modifier which increases the risk of an
17 asbestos-exposed worker being diagnosed with asbestosis.
18 Q. And if we use a threshold for the determination of
19 asbestosis as simply an X-ray of a 1/0 or greater, I want
20 you to assume that to be the threshold of whether somebody
21 has asbestosis. Simply whether they have a 1/0 ILO
22 reading. Okay? Do you understand me?
23 A. No.
24 Q. Are you familiar with the ILO rating scale?
25 A. Yes.

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1 Q. And you understand -- well, let me strike that.
2 Do you have an opinion as to the level of ILO
3 opacity required in order to have an X-ray that is read as
4 abnormal for purposes of interstitial fibrosis?
5 A. Well, you said for purposes of interstitial
6 fibrosis. I don't understand that part of the question.
7 For what purpose?
8 Q. For purposes of determining -- determining that
9 there is presence of interstitial fibrosis that is abnormal.
10 A. Well, in epidemiological studies, the X-rays like
11 that are used to classify whether or not a patient has
12 asbestosis, not for the reasons you state. So I have to
13 relate back to the epidemiological studies, and that's not
14 what they do.
15 Q. Okay. Do you understand, Dr. Smith, that the
16 epidemiological studies in fact do not address clinical
17 asbestosis?
18 A. Some do, some don't.
19 Q. Okay. Isn't it true that the vast majority of the
20 studies that address the issue of smoking and asbestosis do
21 so on the limited issue of the finding of abnormality on an
22 X-ray based on the ILO rating scale?
23 A. I wouldn't word it like that. What is correct is
24 that there are studies in which the information involves
25 cross-sectional data involving chest X-rays of parenchymal

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1 changes and information concerning smoking.
2 Q. Can you answer my question? The first one? Isn't
3 it true that the vast majority of the studies that address
4 the relationship between smoking and asbestosis do so by
5 whether or not you have an ILO score equal to or greater
6 than 1/0?
7 A. Well, you've reworded the question. That's a
8 little less difficult.
9 Q. Okay.
10 A. But when you say the --
11 Q. Can you answer that one?

12 A. -- vast majority, it is true that the majority of
13 the studies have what I said. And I was trying to answer
14 your question, but using my wording as a scientist in
15 response. That the majority of the studies have X-ray
16 changes as part of the cross-sectional design and smoking
17 data, it is those that are linked, and do not have separate
18 clinical data on each patient regarding a diagnosis of
19 asbestosis.

20 THE VIDEOGRAPHER: We need to change the tape
21 pretty soon.

22 MR. SCHROEDER: All right. Let's change the tape.

23 THE VIDEOGRAPHER: This marks the end of tape 1,
24 volume 1 of Dr. Allan Smith. Going off the record. The
25 time is 11:17.

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1 (Brief recess in proceedings - 11:17 to 11:24 am.)

2 THE VIDEOGRAPHER: This marks the start of tape 2,
3 volume 1, in the deposition of Dr. Allan Smith. Going on
4 the record, the time is 11:24. Your microphone, sir.

5 MR. SCHROEDER: Q. Dr. Smith, where we got to
6 where we are now, I think is we were trying to get a
7 specific example in the real world to answer what was my
8 hypothetical question. So now let's return to where we are.

9 We have a group of individuals who smoke who were
10 exposed to asbestos and they have, according to the
11 literature as you just defined it in your last answer that
12 measures asbestosis by, the ILO reading, they have that
13 condition.

14 Are you with me so far? That is, we're not
15 looking at clinical information. We're looking at the ILO
16 as a gauge of whether or not they have the disease outcome
17 of what we will call asbestosis. Are you with me?

18 A. Maybe. I just thought the epidemiological studies
19 involve the ILO X-ray reading and its relationship. The
20 other part, it is inferred in that that that may relate to
21 them having asbestosis, but it is not used as a measure of
22 it. It just happens to be the measure used in the studies
23 that you're able to relate in them the X-ray change to other
24 factors.

25 Q. Okay. And I think that was my point. The point

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1 is all that the epidemiological studies that we're referring
2 to are measuring is the ILO.

3 A. Many of them, yes.

4 Q. Okay. And if you're using those studies and
5 you're trying to reach an opinion as to causation as to
6 whether smoking caused asbestosis as defined by the
7 epidemiological studies, and by that, again, not the
8 clinical, but just whether they would fall within that
9 same -- same disease outcome as measured by the
10 epidemiological studies. Are with you me so far?

11 A. Not quite. I mean it's asbestos that causes the
12 asbestosis. The question is whether smoking caused an
13 enhancement or an effect-modifying role in that causation.

14 Q. Okay. That's fine. And if you start with that
15 premise and you have five smokers, all of whom have the
16 disease outcome as measured by the epi studies of
17 something -- of equal 1/0 or greater -- are you with me so
18 far?

19 A. I think so.

20 Q. Okay. Isn't it true that, while you may reach an

21 opinion as to what proportion of those five have their --
22 may have had their disease outcome by virtue of having both
23 smoked and been exposed to asbestos, that you cannot point
24 to any particular one and pick them out and say "You in fact
25 got your disease outcome solely because you also smoked"?

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1 Isn't that true?

2 A. No, you don't get the outcome solely from
3 smoking. But I think that might have been a slip in the
4 last part of your question.

5 The issue to me would be first if they have
6 asbestosis. And we've indicated they have on the X-ray
7 change. But if the patient actually has asbestosis, then
8 asbestos caused it.

9 The -- what I think you're asking me is what
10 conclusions one can reach on an individual basis about
11 whether their smoking played a role. And in my opinion, I
12 would -- I am of the opinion that in the large majority of
13 such people, if not all of them, smoking would have played a
14 role. So when I consider one individual I can't make the
15 statement with absolute certainty, but I would give the
16 opinion that it's most likely that there was an
17 effect-modifying role of cigarette smoking on the asbestos
18 in its causation of the asbestosis.

19 Q. Let's go back, because I'm apparently not being
20 clear on one point.

21 The -- in this particular case, I'll give you a
22 concrete example. In this particular case, do you
23 understand that the Johns-Manville Trust will compensate a
24 claimant for what they call bilateral interstitial disease?
25 Another word for asbestosis, in this case, based on an X-ray

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1 that is equal to or greater than 1/0?

2 A. No. I've heard things like that, but I'm not
3 expert of it. I have no direct knowledge of that.

4 Q. All right. I want you to assume that in this case
5 the Trust will pay claims for bilateral interstitial disease
6 as long as a claimant has -- and it will be non-disabling,
7 so we're not worried about an impairment -- as long as they
8 have a 1/0 or greater ILO rating. Okay?

9 If you're a claimant and you have a 1/0 ILO
10 rating, you're going to get compensation from the
11 plaintiff. I want you to assume that. Okay?

12 A. Whether they're exposed to asbestos or not? I
13 don't know how the system works.

14 Q. No. And that they claim they were exposed to
15 sufficient amount of asbestos. We're not going to question
16 the amount they were exposed to. I just want you to assume
17 they had asbestos exposure, they present with a 1/0 or
18 greater and they file a claim and the Trust says we'll pay
19 you. Okay?

20 And if that's the threshold the Trust uses for
21 payment, simply a 1/0 with asbestos exposure, don't worry
22 about latency and all those issues, they're not going to be
23 an issue for us. Okay?

24 Assume they meet all the other conditions of
25 asbestos exposure and latency and all of that. They present

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1 with a 1/0 or greater and they get paid. Okay? With me?

2 A. I think so.

3 Q. All right.
4 A. If that's the way it works.
5 MR. FORESTA: Well, that's what he's asking you to
6 assume.
7 THE WITNESS: Okay. I can conceive that
8 assumption.
9 MR. FORESTA: That's fine.
10 (Exhibit 6 marked.)
11 MR. SCHROEDER: Q. Have you ever seen, Dr. Smith,
12 the schedule of standards for how the Trust pays
13 compensation?
14 A. No.
15 Q. I'm going to hand you what's been marked as
16 Exhibit No. 6. This is a copy of the Trust Distribution
17 Plan, which is the schedule of what the Trust requires in
18 order to make payments in this case. Okay? And I want you
19 to take a look at what's noted there as category number II,
20 it's on the first page, in the second column about halfway
21 down.
22 A. (Indicating).
23 Q. Yes, sir. Category number II.
24 A. The top number II? Okay. Oh, I'm sorry. There's
25 a heading here.

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1 Q. It's about halfway down the page. Category number
2 II.
3 A. Yes.
4 Q. Are you with me?
5 A. Yes.
6 Q. It's called Nondisabling Bilateral Interstitial
7 Disease. Right?
8 A. Yes.
9 Q. And the first requirement is that the claimant
10 must document bilateral interstitial lungs disease diagnosed
11 on the basis of X-ray, CAT scan or other high-resolution CAT
12 scan. Right?
13 A. Correct.
14 Q. And I am going to tell you that -- well, let me --
15 I'm sorry, let's skip down. Go to number 2. They have to
16 establish a 10-year latency and, 3, they have to show they
17 were exposed to a Manville product. Okay? Do you see
18 those?
19 A. Yes, I do.
20 Q. I want you to assume they meet number 3. And I
21 want you to assume that they meet number 2.
22 And I want to focus on number 1. And I want you
23 to assume that these people we've been talking about in my
24 example, five people, come to the Trust and they have a 1/0
25 ILO rating or higher. Okay? And it doesn't say it here,

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1 but I will tell you that the Trust standard for whether or
2 not you have X-ray evidence is 1/0 or higher. I want you to
3 assume that. Okay?
4 A. Even though it conflicts with what's stated here?
5 Q. How so?
6 A. It says they have to have a medical report stating
7 that a causal relationship exists between asbestos exposure
8 and the bilateral interstitial lung disease.
9 Q. Let's assume they have that.
10 A. So they then have a clinical diagnosis of
11 asbestosis.

12 Q. That's correct.
13 A. Okay.
14 Q. I want to go to number 1 before we get to the A
15 and B, and focus on the X-ray.
16 And if they present with X-ray of a 1/0 or
17 greater, the threshold is simply 1/0. Okay? So they could
18 have a 1/0, they could have a 1/1, they could have a 2/1 or
19 3/3.
20 A. It conflicts with what's here, Counsel. This is
21 where it gets confusing. Because it says either X-ray in
22 which such readings are made, and then it says CAT scan or
23 high-resolution CAT scan in which such ILO ratings are not
24 made. So that's not what it says here.
25 Q. I want you to assume they're all using X-rays.

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1 Forget the CAT scans or high-resolution CTs.
2 A. Then you want me to forget what the procedure is.
3 Q. No. Because they're not -- they're presenting
4 with X-rays.
5 A. Plus the medical report that links the two?
6 Q. Yes. To asbestos? All right?
7 A. Okay. Fine. I get it.
8 Q. And we're focusing on the ILO threshold of 1/0 on
9 the X-ray. You have got to get to a 1/0 in order to get
10 payment by the Trust. Okay?
11 In other words, when I say on the basis of X-ray,
12 the Trust interprets that to mean 1/0 or higher. Are you
13 with me?
14 A. I -- I take your word for it.
15 Q. Okay. If you have a group of people who are
16 smokers who also have all of these conditions met under
17 category II, isn't it true that you can't with any
18 particular one of them say "If you had not smoked, you
19 wouldn't have gotten a category II disease, according to the
20 Trust"?
21 A. Well, you can't answer that scientifically,
22 because they did smoke under what you asked me to assume.
23 If -- I can't change that in these individuals. They've
24 smoked. So all I can consider is other people who are
25 similar characteristics but didn't smoke. I note that in

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1 them, very few get asbestosis. In other words, it's a
2 minority of workers in any setting who get asbestosis. But
3 I can't tell you what would have happened if these people
4 didn't -- hadn't smoked because they did smoke. You
5 can't --
6 Q. There are some smokers who present with a 1/0 or
7 higher and meet all these other conditions who would have
8 gotten a 1/0 or higher apart from the fact that they smoked?
9 A. I don't know. I don't know about that. I --
10 presumably they might have eventually, some of them, but
11 they're different -- you can't retrace history. They did
12 smoke. So I've got to then think about other people and
13 just note that the minority do.
14 If you change the history of people, which you
15 can't do, but if you do, you're in the hypothetical realm
16 and it's not science. All I can say is they did smoke.
17 They got the disease and it's probable that smoking was
18 causally involved as an effect modifier with the asbestos
19 which was the primary cause of the asbestos lung disease.
20 Q. Well, we know that a lot of people who don't smoke

21 get asbestosis if they're exposed to asbestos, right?
22 A. They do, but they're a small proportion of all
23 workers.
24 Q. We know that -- would you agree with me that if
25 you're exposed to asbestos in the immediate vicinity of your

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1 work for 15 years or more that it is -- that you have a
2 significant risk of getting asbestosis?
3 A. If you're inhaling asbestos fibers at workplace
4 concentrations in the past, that is correct.
5 Q. And that would be true whether or not you smoked,
6 if you're using a threshold of only 1/0?
7 A. Oh, the last part of the question confuses me.
8 Why, if -- I don't understand the if part.
9 Q. Because for purposes of the Trust making a
10 payment, all the Trust cares about is whether you get over
11 1/0.

12 MR. FORESTA: That's not true. I object to the
13 question.

14 THE WITNESS: It's not what you said in here.

15 MR. SCHROEDER: Q. Okay. Assuming everything
16 else is met. Assuming that -- assuming that you meet the
17 other portions of category number II here and you want to
18 focus solely on whether or not you cross the threshold of
19 1/0 --

20 A. But I -- I can't understand that. I mean you're
21 trying to isolate out one part of this and this refers to a
22 medical diagnosis to me of asbestosis.

23 Q. Right.

24 A. That involves more than just an X-ray reading on
25 an ILO scale.

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1 Q. I want you to assume this: That -- we're not
2 worried about the rest of the documentation. I only want to
3 focus on whether -- the issue of whether smoking will cause
4 you to have an X-ray reading of 1/0 or greater in every
5 asbestos worker who smokes. And the answer to that is that
6 it won't cause every asbestos worker who smokes to cross the
7 1/0 threshold simply because they smoked. Right?

8 A. I don't understand your question. I'm sorry.

9 Q. You have a group of people exposed to asbestos in
10 significant amounts. If you're simply -- if the only
11 standard I were going to use is 1/0, which is the standard
12 the epidemiological studies, many of them, use, if that's
13 the standard I use, a lot of people exposed to asbestos are
14 going to cross that threshold whether or not they smoked.
15 Isn't that true?

16 A. I don't know quite what you mean by cross that
17 threshold. But it is true that amongst those workers,
18 amongst both the smokers and non-smokers, some would be
19 found in a clinical investigation to have X-ray changes of
20 1/0 or more.

21 Q. And if you look at a group of people exposed to --
22 look at a group of people who crossed that threshold. In
23 your response you had a group of people who crossed the
24 threshold, some of whom smoke and some who don't.

25 A. That's not what I said, Counsel. I don't know

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1 what you mean by cross that threshold. It's a clinical
2 investigation that's at a certain point in time and they

3 have a X-ray change and it's more than 1/0. I can
4 understand that.

5 Q. Okay. Let's go with that, then. At some point
6 in time they have a 1/0 or greater. Okay? Isn't it true
7 that the asbestos exposure alone, irrespective of the
8 smoking history, will cause a number of those people to have
9 a 1/0 rating?

10 A. No. I wouldn't say that. I'd say in non-smokers
11 the asbestos will in some people lead to lung effects that
12 are identified on X-ray with 1/0 changes or more, and
13 amongst the smokers, some such people will be found but
14 there will be a higher proportion of them.

15 Q. And if you look at a group that's -- of people
16 that have a 1/0 or more, some of whom smoke and some who
17 don't smoke, okay? Are you with me? And if you look among
18 the smokers, you can't pick out any particular individual
19 and say "You, Joe, wouldn't have been here if you had never
20 picked up a cigarette"?

21 A. As a scientist, I've indicated you can't change
22 somebody's history. I would just note that in the
23 non-smokers, only a minority develop asbestosis, as in the
24 smokers. It just happens it's more in the smokers.

25 So in that person, I would say it's probable that

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1 smoking was involved, is an effect modifier in causation
2 along with the asbestos, which was the primary cause of the
3 asbestosis.

4 If you retrace the history and say what if, what
5 if they weren't exposed to asbestos and didn't smoke, then
6 one's not in the realm of science. One would have to say,
7 well, we don't know. We can't resurrect that person's
8 history and go forward with it.

9 Q. All right. Would you agree, Dr. Smith, that to
10 have a -- well, let me strike that.

11 You work with statistics in connection with your
12 epidemiological research, right?

13 A. In part, a small part.

14 Q. Okay. Would you agree that to have a
15 statistically significant result that you need to reject the
16 null hypothesis?

17 A. No.

18 Q. You would accept a result that did not reject the
19 null hypothesis? That is your opinion?

20 A. I don't know what you mean.

21 Q. Would you issue an opinion on causation based on
22 epidemiology that does not reject the null hypothesis?

23 A. I don't know what you mean. The null hypothesis
24 is a statistical -- statistical fabrication that allows
25 certain inferences, but it doesn't relate to the biological

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1 science.

2 Q. My question --

3 A. In the course of deducing that an agent does cause
4 disease, one is in a sense rejecting that the agent doesn't
5 cause disease, which would be a biological null hypothesis,
6 and indeed, obviously, if we infer from all the evidence an
7 agent causes disease, we're rejecting that it does not cause
8 disease.

9 Q. And my focus is if you in your epidemiological
10 research cannot reject the null hypothesis, would you still
11 reach an opinion or could you still reach an opinion of

12 causation?

13 A. Well, you started saying in my epidemiological
14 research. In my epidemiological research, I don't even
15 think that way, nor do most epidemiologists. The null
16 hypothesis is a biostatistical construction in order to do
17 certain biostatistical calculations. It doesn't relate to
18 the biological science nor the way we think about our
19 studies.

20 Q. Let me try it this way, then. Let's assume that
21 you conduct an epidemiological study and you determine that
22 there's the relationship between disease and some factor,
23 and the relationship is 1.8 relative risk. You're exposed
24 to that factor, you have a 1.8 relative risk of getting that
25 disease outcome. Okay? And that there is a 95 percent

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1 confidence limit on that relationship that extends to .75 to
2 2.0.

3 Can you give, under those circumstances, or would
4 you give under those circumstances an opinion that that
5 factor causes disease?

6 A. Well, I've never done so, and I don't think I ever
7 would.

8 There's criteria by which we establish causation
9 in the epidemiological studies, and they don't relate to
10 number games like that.

11 Q. If your epidemiological study has, among the
12 confidence level, 1.0, would you still give your opinion
13 that there is causation?

14 A. Counsel, in causal inference in epidemiological
15 studies in the science I work with, we don't base causal
16 inference on one number. I've never done so. I don't think
17 I ever will. I can't conceive of a situation in which I
18 would.

19 We base it on the body of human studies,
20 epidemiological studies.

21 Q. Let's assume you have a body of human studies, and
22 that the body of studies result in a 1. -- same figures I
23 gave you, 1.8 relative risk, but that the body of studies
24 include wide confidence levels, even when combined so that
25 you go down to a .75 and up to a 2.0. Would you still,

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1 under those circumstances, be of the opinion that that
2 factor caused disease?

3 A. If we take the body of evidence like that, then we
4 may use what's called meta analysis to assist us. And in
5 that setting, one of the parameters that I would consider is
6 whether the findings in the studies overall are just due to
7 chance. And if, when considering the body of evidence, the
8 relative risks derived from all studies combined was one
9 that had very wide confidence intervals such that the
10 overall pattern might just be due to chance, then I've never
11 concluded that the agent was causal in such a situation.

12 Q. And when you testify that it could be due to
13 chance, is it correct to say you're referring to whether it
14 includes at the lower end of the confidence level limit 1.0?

15 A. Yes, but there's usually many confidence
16 intervals. And I was there referring to the body of
17 evidence where it would be a meta analysis.

18 (Interruption by Reporter)

19 THE WITNESS: Which involves meta analysis. And
20 even there, there may be several estimates depending on

21 which studies, which study designs and which things one is
22 looking at. But what I can tell you is that if at the end
23 of that the relative risk estimates were such that they
24 could well have been due to chance, by that I mean they
25 would have broad confidence intervals such as you've

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1 described, then I wouldn't infer that the -- or haven't
2 inferred in my professional experience that the agent was a
3 cause of that disease.

4 MR. SCHROEDER: Q. Have you reviewed
5 Dr. Rabinovitz's report in this case?

6 A. Is that one in this?

7 Q. No, it's not.

8 A. Rabinowitz?

9 Q. Rabinovitz.

10 A. Rabinovitz? The name rings a bell, but I don't
11 recall.

12 Q. Do you understand that Dr. Rabinovitz collected
13 smoking information from some of the files of the claimants
14 to the Trust in this case?

15 A. I don't recall.

16 Q. Okay. Do you know that she measured their smoking
17 history in pack/years?

18 A. I don't recall. I am aware that there was some
19 work on collecting data from the Manville Trust plaintiffs,
20 and I was at some meeting a long time ago discussing that,
21 but I have not been involved with it since and I don't know
22 what's happened.

23 Q. Would you agree that in measuring smoking
24 dose-response for disease, that pack/years is a preferable
25 measurement? Pack/years such as Dr. Rabinovitz was using is

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1 a preferable measurement as opposed to duration?

2 A. No. It depends what one is doing. Duration on
3 its own, I would say pack/years was better than that. But
4 pack/years itself has its own problems.

5 Q. And what are those?

6 A. Well, pack/years is strongly related to age. And
7 because of that, one can fall into problems if one's not
8 careful in the interpretation of data.

9 Q. If you control for age, would you prefer -- well,
10 let me ask it this way: If you can control for age,
11 which would you prefer? Pack/years or duration?

12 A. It would depend on what I was going to do with the
13 information.

14 If you -- one measure incorporates the other. But
15 there's some more information. If you're interested in
16 inference about duration, then one should use duration. If
17 one's interested in a combination of intensity and duration,
18 by intensity, I mean packs per day, then one should use
19 pack/years. But it depends on what the use of the
20 information is.

21 Q. All right. And I will tell you. What if the use
22 is to determine dose-response relationship?

23 A. Between what and what?

24 Q. Between smoking and a disease outcome.

25 A. Which disease outcome?

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1 Q. Lung cancer.

2 A. And what -- the question then is what are you

3 going to do with the information once you got it. For what
4 purpose is one doing it? Because the lung cancer risks do
5 relate to duration of smoking and they do relate to
6 pack/years smoked. But then it's a question of what are you
7 doing this for as to --

8 Q. Under what circumstances would you think that
9 pack/years would be a more -- a preferable measurement of
10 smoking, if you want to measure the relationship between
11 smoking and lung cancer?

12 A. You mean preferable to duration?

13 Q. Yes, sir.

14 A. Well, I always prefer to use both packs per day
15 and duration, and there's separate variables and deal with
16 them that way. But if one --

17 (Interruption by Reporter.)

18 THE WITNESS: I always prefer to use packs per day
19 and duration as separate variables. But if one wanted to
20 incorporate some information on intensity in the
21 dose-response relationship, then duration doesn't give
22 that. Pack/years does incorporate it in the way that it's
23 mixed up with duration.

24 So I think the fact that it, though, incorporates
25 a bit of information on intensity and some on duration means

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1 that it is giving more information so that if you're looking
2 at the relationship between lung cancer and smoking, it
3 inherent or implicit in that is more information than just
4 the duration.

5 MR. SCHROEDER: Q. Let me ask you one other
6 question about that distribution plan. Exhibit number --
7 what is that? No. 6?

8 Would it be your opinion that, apart from the
9 smoking history of people who would meet the conditions in a
10 category number II, that asbestos would have been a
11 causal -- would have played a causal role in all the people
12 who would meet those conditions?

13 A. As listed here, there is a statement that there's
14 a medical report of a causal relationship between asbestos
15 exposure and the bilateral interstitial lung disease in the
16 person. Now, that doesn't mean all such reports are
17 perfect, but if it's done carefully, then the answer is yes,
18 in the large majority, even though sometimes, as always in
19 disease, there may be some misdiagnosis.

20 Q. Would you agree, Dr. Smith, that presently we do
21 not know the mechanism, if any, between smoking and lung
22 cancer?

23 A. Well, we know there are mechanisms, but we don't
24 know precisely what they are. We know various things that
25 are likely to be part of it, but we don't know all the

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1 steps.

2 Q. Is it your opinion, Doctor, that asbestos alone
3 can cause a condition of lung cancer?

4 A. Yes. Being asbestos without cigarette smoking,
5 the answer is yes.

6 Q. Okay. And the condition of asbestosis is not a
7 necessary condition for asbestos to cause lung cancer, is
8 it?

9 A. That is my opinion. Yes.

10 Q. And is it your opinion that there is no threshold
11 for asbestos exposure to be causally related to lung cancer?

12 A. When you say to be causally related to, I'm not
13 sure what you mean by that. If you say is there a threshold
14 in asbestos causing lung cancer, then I can answer that
15 question.

16 Q. Okay. Let me ask that question. Is there a
17 threshold, in your opinion, for asbestos causing lung
18 cancer?

19 A. There probably is, but it's in some people very
20 low, and we don't know exactly what it might be in such
21 people in any case.

22 Q. For persons who would have a minimum of 15 years
23 occupational exposure to asbestos dust in their immediate
24 vicinity, is it your opinion that those people would have
25 crossed any threshold for the asbestos to be causally

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1 related to the lung cancer?

2 MR. FORESTA: Object to the form.

3 You can answer, Doctor.

4 THE WITNESS: You said to be causally related
5 again. You mean to be causally involved? I don't know. We
6 don't know the reason why some people get lung cancer and
7 some don't. And there may be susceptibility factors which
8 we're yet to identify, which mean that for some people
9 neither asbestos nor smoking will ever produce a lung cancer
10 in them. But that's an area of research. It's something we
11 don't know the answers to.

12 MR. SCHROEDER: Q. Would it be your opinion that
13 if -- well, strike that.

14 The Trust in its distribution plan at one point
15 says that the claimant must demonstrate at least 15 years of
16 heavy occupational exposure to asbestos-containing materials
17 in employment regularly requiring work in the immediate area
18 of visible asbestos dust.

19 And if that's the standard they use for whether or
20 not you have sufficient asbestos exposure for them to make
21 compensation payment, is it your -- would it be your opinion
22 that that is above whatever threshold there might be for
23 asbestos being capable of producing lung cancer in
24 individuals?

25 MR. FORESTA: Before you answer the question,

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1 Doctor, are you referring to a specific part of the plan?

2 MR. SCHROEDER: Yes. Category number V.

3 MR. FORESTA: The second page?

4 MR. SCHROEDER: Paragraph number 2 on page 2.

5 MR. FORESTA: And I'm sorry. Could I have the
6 question read back, now?

7 MR. SCHROEDER: I can make it simpler.

8 Q. Is category V, paragraph number 2, above whatever
9 threshold there may be?

10 A. Well, Counsel, I was trying to explain that
11 thresholds may vary between individuals. In a general group
12 sense, yes.

13 (Interruption by Reporter.)

14 THE WITNESS: Thresholds may vary between
15 individuals based on susceptibility, genetic susceptibility
16 and other things. But in a general sense, one would expect
17 to find increased grades of lung cancer associated with
18 exposure descriptions like this if the latency were also
19 long enough.

20 MR. SCHROEDER: Q. If you have sufficient

21 asbestos exposure to result in an ILO rating of 1/0,
22 whatever amount that may be, does that indicate to you a
23 level sufficient to be causally related to lung cancer?
24 A. If asbestos has caused interstitial disease in the
25 lung it's asbestosis, and if that appears in any one person
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1 at some point it might progress through 1/0, and I would
2 expect to find increased rates of lung cancer in such
3 people.

4 Q. And in fact, it's your opinion that for persons
5 who have asbestosis, that the risk of lung cancer
6 approximates 10? Correct?

7 A. Yes. Patients with asbestosis have about 10 times
8 the rate of lung cancer as people in the general population
9 who are not occupationally exposed to asbestos.

10 Q. And you have written before that asbestos
11 inhalation is the main cause of cancer resulting from
12 workplace exposure to carcinogens, correct?

13 A. I know I've said it before. I don't recall
14 writing it, but I may have.

15 Q. And you agree with that?

16 A. Yes.

17 Q. Do you know what type of asbestos fiber was
18 contained in Johns-Manville Company's products?

19 A. No.

20 Q. Do you believe all fiber types are capable of
21 causing lung cancer?

22 A. Yes.

23 Q. Do you agree that there's no threshold exposure to
24 asbestos for it to be causally related to mesothelioma?

25 A. You mean for it to cause mesothelioma?

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1 Q. Yes.

2 A. Well, I think there probably is. We don't know
3 what it is, and if there is one it's extremely low. We know
4 that some cases occur from family contact or from living
5 near an asbestos workplace.

6 Q. If we return again to an individual who has the
7 1/0 ILO rating from asbestos exposure, that would be above
8 whatever low threshold theoretically there might be for
9 mesothelioma?

10 A. Correct. If asbestos occurred and caused
11 interstitial disease in the lung which is asbestosis and --
12 in other words, if the ILO reading indicates asbestosis
13 along with the other clinical criteria, then such people
14 would be at increased risk of mesothelioma in my opinion.

15 Q. And just to be clear, when you say they would have
16 asbestosis, that would be an ILO reading of 1/0 or greater,
17 according to your testimony? Right?

18 A. No.

19 MR. FORESTA: Objection. Sorry. Go ahead,
20 Doctor. I'm sorry.

21 MR. SCHROEDER: Q. What I want to do, Doctor, is
22 I want to focus on people who have ILO readings of 1/0 or
23 greater that are the consequence of asbestos exposure. And
24 if you have an ILO rating at that level, is it your opinion
25 that whatever threshold theoretically there could be for

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1 mesothelioma, those people would have sufficient exposure to
2 be above the threshold?

3 A. Yes, if they have asbestosis like that, then they
4 would be at increased risk of mesothelioma. As I indicated,
5 that's a group threshold. On an individual basis, some for
6 whatever reason, genetic or otherwise, may still be -- or
7 may still not be at increased risk, but that's -- the realm
8 of scientific research on a group basis is it's fair to say
9 they would be above a threshold and one would expect to find
10 increased rates of mesothelioma amongst them.

11 Q. Do you have an opinion as to what the relative
12 risk is for lung cancer among those who have asbestosis as
13 defined at 1/0 or greater?

14 A. Asbestosis is a disease in the lungs. It's not
15 defined by a parameter.

16 Q. Okay. The reason I say that, Doctor, is there is
17 a dispute in this lawsuit as to what the elements are to
18 make a definition of asbestosis. And I'm trying to not
19 engage in a debate on those elements and to put them off to
20 the side and see if we can focus on some things upon which
21 we can communicate without having to argue over, well, is it
22 asbestosis or not. Because every time you give me an answer
23 and say, and throw in the word "asbestosis," I want to be
24 sure that we're on the same page as to what that means. And
25 I'm trying to avoid somebody later coming back and saying,

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1 "No, I said this and I meant that."

2 So what I want to do is focus on not so much what
3 all the elements are to clinically define the disease of
4 asbestosis. I want to focus on if you're accepting somebody
5 has an ILO rating of 1/0 or greater and that that rating was
6 caused by asbestos exposure, so that you have whatever level
7 of interstitial fibrosis one would interpret at a 1/0 or
8 greater level, do you have an opinion as to what that
9 person's risk would be for then contracting mesothelioma?

10 MR. FORESTA: Just so I understand, now you're
11 taking it out of the realm of whatever Dr. Smith's
12 definition of asbestosis is and you're just asking somebody
13 shows up, presents with an ILO reading of 1/0 or greater,
14 what's that person's relative risk of contracting meso?

15 MR. SCHROEDER: That's correct. Assuming, of
16 course, that the 1/0 is a consequence of asbestos exposure.

17 THE WITNESS: I think that's where the confusion
18 is. As soon as you say something in the lungs like that
19 that's interstitial --

20 MR. SCHROEDER: Q. Right.

21 A. -- is a consequence of asbestos exposure, that is
22 asbestosis. As a scientist.

23 Q. In your view, that would be asbestosis?

24 A. There's something going on in the lungs. If you
25 say it's caused by asbestos, and if it leads to changes in

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1 the X-ray, it is asbestosis.

2 Q. At that level, for people who have 1/0 or greater,
3 do you have an opinion as to what their risk would be for
4 later contracting mesothelioma?

5 A. It is my opinion that amongst patients who have
6 asbestosis -- and I can only give you my answers as a
7 scientist. I can't deal with the vagaries of some legal
8 case.

9 As a scientist, I would say, well, if they have
10 lung changes caused by asbestos, then -- and it's throughout
11 the lung, not the pleura, then they have a disease effect

12 called asbestosis.

13 Amongst patients with asbestosis who have been
14 followed up, then in deaths in the next 10 years or so, very
15 roughly, I think it's around five percent will die from
16 mesothelioma. But that's -- I would need to look up to give
17 you more precise numbers. I can only give you as I sit here
18 a ballpark estimate.

19 Q. Is there a reasonable range that you can tell us
20 today?

21 A. I would need to look that up. I -- also, I didn't
22 answer your question in terms of relative risk because there
23 may be no or exceedingly few cases that aren't caused by
24 asbestos. And in that, in the main, relative risk breaks
25 down. So my answer to you was in what we call absolute risk

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1 terms that around about five percent may die of
2 mesothelioma.

3 Q. So five percent of the -- five percent of the
4 whole group exposed to asbestos? Is that your --

5 A. No.

6 Q. I'm not sure I'm understanding you.

7 A. It's of patients diagnosed to have asbestosis who
8 are then followed up over the years to see what they die
9 from.

10 Q. Oh. And five percent of that group would die from
11 mesothelioma, approximately? Is that your --

12 A. Right. It's a very rough ballpark estimate. As I
13 sit here, that's approximately correct.

14 Q. Okay. And if we don't focus on mortality but
15 focus just on incidence of disease, does that change your
16 answer? I'm not worried about what they died from; I'm
17 worried about whether they contracted the disease.

18 A. No, it doesn't. Nearly all patients with
19 mesothelioma die from it.

20 Q. That's what I thought you said. Okay.

21 Would you agree, Doctor, that only approximately
22 10 percent of smokers contract lung cancer?

23 A. For one-pack-a-day smokers who continue to do so,
24 that is correct. About 1 in 10 will die of lung cancer.

25 Q. Would you agree that smoking is not -- are you

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1 familiar with the terms necessary and sufficient causes?

2 A. Yes.

3 Q. Would you agree that smoking is not a necessary
4 cause of lung cancer?

5 A. I don't use those terms. It is correct that some
6 cases occur without smoking. And in that sense, you might
7 could say it's not necessary.

8 Q. Would you agree that smoking is not a sufficient
9 cause of lung cancer?

10 A. I don't know. It is possible that chemicals in
11 cigarettes are the only cause in some cases.

12 Q. How do you answer the question? Would you agree
13 that smoking is not a sufficient cause?

14 A. I don't use those terms. I find them rather vague
15 and at times misleading, so I -- I think what -- if -- I was
16 saying that in some instances it's my opinion that smoking
17 is sufficient on its own to be the only cause of somebody's
18 lung cancer, that I tend to think that if diseases is
19 multi-factorial and there being other co-factors in genetics
20 and things like that; that nevertheless I would be of the

21 opinion that the smoking in isolation on its own may cause
22 some cases. And I think those, then, that use that
23 terminology of sufficient would say it was a sufficient
24 cause.

25 Q. You've testified before, have you not, that the

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1 presence of emphysema does not increase the risk of lung
2 cancer above that of smoking? Right?

3 A. It is correct that I am of the opinion that
4 emphysema in itself does not increase the risk of lung
5 cancer. It's the smoking.

6 It is true, of course, that patients with
7 emphysema on average smoke more than others, so patients
8 with emphysema will have higher rates of lung cancer.
9 Though in my opinion, it is dependent on the amount they
10 smoked, not on the presence of other -- or otherwise of the
11 disease emphysema.

12 (Exhibit 7 marked.)

13 MR. SCHROEDER: Q. I'm going to hand you what's
14 been marked as Exhibit No. 7. Can you identify that for us?

15 A. It is material I prepared in connection with this
16 case.

17 Q. And it's your report in this case? Right?

18 A. I suppose I'd need to check right through it. Its
19 cover page is a little different from what I have here. It
20 certainly looks like after the Summary of Qualifications and
21 Summary of Testimony comes the same material I have there in
22 my report.

23 Q. Is Exhibit No. 7, your report produced in this
24 case, the same as the copy of your report in your file?

25 A. Yes, it appears to be the same material I have

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1 here. It's just structured slightly differently.

2 Q. Okay. Do you not have a current copy of your --
3 which is more current?

4 A. Well, this is probably as submitted. What I have
5 here is the material which then went into this with a cover
6 sheet and the tables have been put together at the back,
7 whereas I had them here separated. So I -- they're the
8 same, I think.

9 Q. In your report you focus a section on lung cancer,
10 do you not?

11 A. Yes.

12 Q. And in your lung cancer discussion about synergy,
13 you focus on a discussion on a study conducted by Erren,
14 correct?

15 A. It is mentioned, yes.

16 Q. In fact, it's not just mentioned; it is the
17 subject of table number 2 attached to your report; isn't
18 that correct?

19 A. I wouldn't quite word it that way, but the
20 information in Table 2 in part comes from the paper by
21 Erren.

22 Q. Well, Table 2 you didn't derive from your own
23 independent review of the studies, did you?

24 A. The numeric data was taken from the paper by
25 Erren. That is the left-most columns.

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1 Q. Did you conduct a review of the epidemiological
2 literature relating to the question of smoking and asbestos

3 interaction for lung cancer?
4 A. Could you repeat the question?
5 Q. Yes. In conjunction with the preparation of your
6 report and your work in this case, did you conduct a review
7 to gather all the literature that relates to the issue of
8 what interaction, if any there is, between smoking and
9 asbestos for the disease outcome of lung cancer?
10 A. Well, I was aware there was such interaction and
11 that over the course of the years I had read and obtained a
12 variety of publications that relate to that topic.
13 At the time that I prepared my report, I was aware
14 of all the studies. At various points I've read them, but I
15 didn't necessarily sit down, obtain them and read them all
16 again.
17 Q. Is it your opinion that the studies contained in
18 Table 2 reflect the studies addressing smoking and asbestos
19 interaction for lung cancer which contain sufficient data
20 upon which one could reach an opinion on interaction?
21 MR. FORESTA: Object to the form of the question.
22 Dr. Smith, you can answer.
23 THE WITNESS: I believe one has ample evidence to
24 reach opinions about synergy of asbestos and smoking from
25 these studies.

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1 MR. SCHROEDER: Q. My question is actually a
2 little bit different, I think.
3 Is it your opinion that these 12 studies on Table
4 7 are the studies in the -- well, let me strike that.
5 Dr. Erren in his paper indicated, did he not, that
6 he attempted to collect those studies that had sufficient
7 quantitative information upon which one could reach some
8 conclusion about interaction between smoking and asbestos
9 for lung cancer. Isn't that right?
10 A. I'm not sure if you're referring to what he has on
11 the first page in the right column, last paragraph which
12 states that they selected studies for inclusion in the
13 analysis by verifying that sufficient data were available in
14 the reports to estimate relative risks of lung cancer and so
15 on.
16 Q. Dr. Erren's paper states that they searched
17 Med-Line, right?
18 A. Correct.
19 Q. Which you understand to be a database for
20 epidemiological studies, among other things, right?
21 A. And medical literature generally.
22 Q. And Dr. Erren concludes that he selected for
23 inclusion in his article -- and let's go ahead and mark a
24 copy of this so we're working off the same page.
25 (Exhibit 8 marked.)

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1 MR. SCHROEDER: Q. Okay. We're going to mark his
2 article as Exhibit No. 8. Okay? Do you see that?
3 A. Yes.
4 Q. And Dr. Erren concludes that --
5 MR. FORESTA: Why don't you take a look at that.
6 I'm sorry, Tom.
7 MR. SCHROEDER: Q. That is Exhibit 8, right?
8 A. Right.
9 Q. That is his article, right?
10 A. Correct.
11 Q. Okay. And Dr. Erren basically says in his paper

12 that he says "I've looked at the literature, I've done my
13 literature search, and these are the studies that I think
14 address the issue of interaction with smoking and asbestos
15 and lung cancer," right?

16 MR. FORESTA: Object to the form.

17 You can answer, Dr. Smith.

18 THE WITNESS: Well, what he actually did is in
19 that sentence there. Perhaps it's easy to follow, too.

20 MR. SCHROEDER: Q. Well, what he says is he
21 selected -- well, let me ask it this way: If one wanted to
22 know what the studies were which you should review so that
23 you could reach quantitative conclusions about whether
24 there's an interaction between smoking, asbestos and lung
25 cancer, are the ones that Dr. Erren concludes in his paper

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1 the studies we ought to be looking at?

2 MR. FORESTA: The only ones? Or -- I just want to
3 make sure --

4 MR. SCHROEDER: Yes.

5 MR. FORESTA: -- we're working on the same
6 terminology.

7 MR. SCHROEDER: Q. Is this the body of literature
8 that we ought to be looking at in order to reach
9 quantitative conclusions, that is, that there is enough data
10 in the studies that you can reach quantitative conclusions?

11 A. I wouldn't word it that way. I would say the key
12 studies are here in the particular endeavor in this paper to
13 conduct a meta analysis that they -- each study -- or it was
14 desirable that each study met these criteria.

15 Q. Okay. And you've not yourself done an independent
16 review to determine whether there are any other studies that
17 have sufficient quantitative information in order to conduct
18 the same kind of analysis that Dr. Erren has conducted in
19 his paper which are not included in his paper?

20 A. Well, at that time I suggested to him what studies
21 he should start looking at, and that a Med-Line search
22 should be done. And at that time I wasn't aware of any
23 other key studies that I thought had been omitted.

24 Q. So you're comfortable, are you not, that the
25 studies in his paper are those studies?

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1 A. These are the key studies on which inference can
2 be based. I'm comfortable with that. That that's a perfect
3 list, they're not. There may be one or two others. I think
4 Dr. Lee in his report suggested that there might be some
5 others. But I believe the key ones are here. And since I
6 found that my main conclusion agreed with that of Dr. Lee,
7 then I didn't push further.

8 Q. Okay.

9 A. When I saw that he'd mentioned that maybe
10 something was missing here.

11 Q. I'm sorry. I missed that last part. What did you
12 mean by that, "when I saw that he mentioned that
13 something -- maybe something was missing"?

14 A. I think he may in his report have cited a couple
15 other studies or something like that that aren't part of
16 Erren's paper.

17 Q. Who may? Oh, Dr. Lee?

18 A. Correct.

19 Q. Okay. All right. Well, I'm concerned with your
20 opinions. And as I understand your testimony, it's your

21 opinion that these studies listed in Dr. Erren's report were
22 suggested by you to Dr. Erren and that they do comprise the
23 key studies we ought to be looking at.

24 A. Well, I didn't suggest to him the whole list. I
25 got him started and suggested certain articles and that he

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1 start looking at those, because I was aware they were key
2 articles.

3 In my opinion, valid inference can be made from
4 these studies.

5 Q. Okay.

6 A. And I'm not aware of a set of studies which would
7 contradict in any way the findings which can be interpreted
8 from these studies. So these are the -- constitute the main
9 body of evidence as I understand it.

10 Q. Okay. There's no other important study in your
11 view that's been overlooked by Dr. Erren?

12 A. Correct.

13 Q. Now, would you agree with me -- well, strike that.
14 Are you familiar with Dr. Selikoff's 1968 study on
15 smoking, asbestos and neoplasia?

16 A. I have not read it recently.

17 Q. You would agree with me that it is not one of the
18 studies included in the list of 12 by -- is it Dr. Erren?
19 Is that right?

20 A. That is correct.

21 Q. All right. It is not one of those 12, is it?

22 A. I would need to see which particular paper you're
23 referring to.

24 Q. Okay.

25 A. There are instances where later publications of

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1 the same cohort supersede earlier ones. And I would need to
2 check it out by looking at that article.

3 Q. Okay. I am referring specifically to whether or
4 not Dr. Erren relies specifically on the 19 -- the data
5 contained in the 1968 study. And it's my reading of this
6 article that, Exhibit No. 8, that he does not. Is that
7 correct?

8 A. I'd need to see the 1968 paper.

9 Q. Okay. Do you recall that the 1968 paper had no
10 death information for asbestos workers who didn't smoke?

11 A. I would need to see it. I don't know which
12 article you're referring to.

13 Q. Would you agree with me that the 1968 paper did
14 not have sufficient quantitative conclusion -- quantitative
15 information to be included in the list of 12 or more in
16 Dr. Erren's paper?

17 A. I'd need to see it. I don't recall from memory.

18 Q. If I were to tell you -- if you were to assume
19 that there is no information -- strike that.

20 If I were to tell you that there were no death
21 information among asbestos workers who did not smoke in the
22 1968 study, would you agree that because, by virtue of that
23 fact, then you would have insufficient data in order to
24 reach conclusions on interaction based on that one study?

25 A. I'd need to see the study. It depends.

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1 Q. What would it depend on?

2 A. Well, if I could get a setting where an agent only

3 caused disease in the presence of one other, it's just --
4 and that one can make inference from such studies about
5 synergy.

6 Q. What --

7 A. In this instance, we know from a series of studies
8 that lung cancer can occur in workers exposed to asbestos
9 who do not smoke. And with that piece of knowledge, we know
10 that the zero in the category of asbestos workers who don't
11 smoke may be due to smaller numbers than any one particular
12 study. So in that regard, since we know that, then the
13 synergy estimates on which Dr. Erren worked could not use
14 the -- a study that had zero in that category.

15 Q. To make sure I understand your last statement,
16 then, so is it your view that with zero in that category in
17 the '68 study, the category being asbestos workers who
18 didn't smoke, that that particular study, the '68 study,
19 would lack the information that Dr. Erren was using in order
20 to conduct the kind of quantitative calculations that he
21 does in his article?

22 A. That's not that it lacked it. It's just that the
23 calculations require some observations in each cell in order
24 to use the formulas that Dr. Erren used.

25 One could work out ways of incorporating such a

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1 study, actually, but one would have to make certain
2 assumptions. And since there are enough studies that don't
3 require that, then one could say it lacked information to
4 warrant being put in this type of analysis, but it doesn't
5 mean to say it would be dismissed from consideration in
6 thinking about synergy.

7 Q. In 1968 when the study was published, forgetting
8 what we know now, looking backwards, but when the study came
9 out in 1968, can you give an opinion as to whether or not at
10 that point in time you could have conducted a quantitative
11 analysis like Dr. Erren did, with only the 1968 data set?

12 MR. FORESTA: Object to the form of the question.
13 Go ahead, Dr. Smith.

14 THE WITNESS: Well, this is a meta analysis here.
15 By definition, it uses more than one study, so I don't know
16 how to answer that question.

17 MR. SCHROEDER: Q. Well --

18 A. You would have to show me this 1968 paper. You
19 know, if you're going to ask me any more questions about it,
20 that's a long way back in time that I read that paper. I
21 just could note to you you could make inference about
22 synergy when you only get disease with two exposures. And
23 the people who use sufficient and necessary would say that
24 it was necessary to have both exposures to get lung cancer.
25 Where asbestos would not on its own without smoking, for

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1 example.

2 So one can make inference from such studies. But
3 given the body of knowledge that asbestos alone can cause
4 lung cancer, then to use the types of measures of synergy
5 that Dr. Erren did, one wouldn't incorporate it in that meta
6 analysis.

7 Q. Synergy is -- the word "synergy" implies a
8 biological concept, right?

9 A. I use it that way.

10 Q. And what happens in cells has nothing to do with
11 statistical models, right?

12 A. It depends what statistical model it is. There
13 are statistical models that focus on what happens in cells,
14 but as far as the -- or many statistical models, they ignore
15 the underlying biology.

16 Q. Well, you say in page 2 of your report: "What
17 happens inside cells has nothing to do with statistical
18 models." Correct?

19 A. I'm referring in your report focuses on the
14 presence or absence of a parenchymal abnormality?

15 A. The main studies involve X-ray changes reporting
16 parenchymal abnormalities or not, yes.

17 Q. And the studies use as a tool the prevalence
18 method, right?

19 A. We don't refer to it that way. The studies are
20 cross-sectional in nature.

21 Q. And they measure prevalence?

22 A. That's one of the things they assess.

23 Q. And prevalence is the proportion of disease among
24 the total number of cases for a population during a window
25 of time, right?

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1 A. No.

2 Q. Why don't you define for the jury what you mean by
3 prevalence.

4 A. Strictly, it's at one point in time as in a
5 cross-sectional study, you go in and do a study and at that
6 point in time you assess whether or not they have the
7 disease. I think what you may be referring to is what
8 sometimes is called period prevalence, which refers to
9 proportion who may have some condition during some period at
10 some point in time.

11 Q. Okay. Well, what I meant was you -- if you take a
12 look at the number of cases of disease in a population at a
13 measuring point in time, that's prevalence?

14 A. At one point in time, yes. Like when you take an
15 X-ray, it's the X-ray at that instant.

16 Q. You've lost your microphone, Dr. Smith. You're
17 going to need to -- okay.

18 But to contrast, incidence, then, is the number of
19 new cases during a defined window of time?

20 A. Correct.

21 Q. And would you agree that by using prevalence
22 analysis, what you're really trying to approximate for
23 purposes of this case is lifetime incidence?

24 A. No.

25 Q. Okay. In this case, do you understand that the

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1 Manville Trust has agreed to pay claimants for injury
2 whenever their injury occurs, so that anybody who presents
3 with an asbestos-related disease that's compensable under
4 their Trust Distribution Plan will be compensated by the
5 Trust?

6 A. No, I'm not expert on that.

7 Q. If that's the way in fact that the Trust operates,
8 if in fact the Trust will pay anybody at any point in time
9 so that if ever during your lifetime you get a disease and
10 present your claim to the Trust they'll pay you, would you
11 agree with me that the appropriate question to ask then in
12 this case is how many, if any, more Trust claimants are
13 presenting with claims because they smoke?

14 MR. FORESTA: Objection.

15 THE WITNESS: I don't know.
16 MR. SCHROEDER: Q. Would you agree that if that's
17 the question, that's a question of lifetime incidence of
18 claims?
19 A. I don't understand the question to start with.
20 That's why I said I don't know.
21 Q. Okay.
22 A. But I don't know what you're getting at. It's not
23 areas that relate to my testimony.
24 Q. Well, with all due respect, I'll -- we'll have a
25 determination later of what relates to what.

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1 What I'm trying to get to, Doctor, is what you are
2 opining on in your report is based essentially on a
3 prevalence ratio that is then modified into a prevalence
4 odds ratio? Correct?
5 A. No.
6 Q. You start with a prevalence analysis in your
7 report, right?
8 A. Well, I wouldn't word it that way. My report can
9 speak for itself and we can go through it, but you're trying
10 to characterize it in ways that are inappropriate,
11 inaccurate and misleading, with all due respect.
12 ^ Q. You start in your report with -- would you mark
13 that, please, for me.
14 You start in your report by looking at the studies
15 of parenchymal abnormalities that report prevalence ratios,
16 right?
17 A. I start with cross-sectional studies of workers
18 that had X-ray changes and have smoking data.
19 Q. Okay. And you reached the conclusion in your view
20 that the results reported by those studies understate the
21 prevalence of cases attributable to smoking because of a
22 survivor bias? Fair?
23 A. Close.
24 Q. Okay.
25 A. But not quite fair.

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1 Q. Why don't you correct it to be accurate, in your
2 view.
3 A. It can be concluded that all cross-sectional
4 studies will underestimate the association of between
5 smoking and asbestosis.
6 Now, that relates to this survival impact. But
7 put simply, these studies by their nature will underestimate
8 that association.
9 Q. Well, that's the conclusion you reach, right?
10 A. I don't know what you mean. I just said that's
11 what I concluded.
12 Q. Okay. Now, when you say cross-sectional studies,
13 cross-sectional studies are the basis for which
14 Dr. Nicholson concluded that there was an increased
15 prevalence of asbestosis among smokers, right?
16 A. Correct.
17 Q. And you're using those same studies, or some of
18 them, in your report, right?
19 A. Correct.
20 Q. And those studies are the basis for your
21 conclusions and your discussion about prevalence ratios in
22 your report, right? Let me start again.
23 This is not meant to be difficult, and if it is,

24 I'll try to move as quickly as we can.

25 You refer in your report to prevalence ratios in

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1 cross-sectional studies, right?

2 A. I calculate them and discuss them in my report,
3 yes.

4 Q. Okay. And the prevalence ratios are the results
5 that are reported by the authors of the cross-sectional
6 studies, right?

7 A. No. I calculated them from the data they
8 presented in their studies. Excuse me. Did you say --
9 okay. I'm con -- it's my confusion now on Friday afternoon.

10 It is true that many of these investigators report
11 prevalence ratio. And what I have calculated from them are
12 prevalence odds ratios.

13 Q. Right. And what -- essentially what you're doing
14 in this part of your report on parenchymal abnormalities is
15 looking at the cross-sectional studies, developing a
16 prevalence ratio, making the conclusion in your view that
17 there's a survivor bias, therefore using a prevalence odds
18 ratio to attempt to adjust for that, and coming up with a
19 prevalence odds ratio for the effect of smoking on
20 asbestosis?

21 A. No. That's not correct. The prevalence odds
22 ratio is the appropriate measure if one is trying to
23 estimate in steady state the underlying incidence rate
24 ratio.

25 Quite interdependent of that, there's still an

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1 underestimation due to the survivor effect.

2 Q. Let's go to one of your examples. You have an
3 example in here that you give on page 9. And what you're
4 doing here is you are trying to get eventually to a
5 prevalence odds ratio for purposes of reporting your
6 conclusions with respect to the relationship between smoking
7 and asbestosis, right?

8 MR. FORESTA: Objection.

9 You can answer, Dr. Smith.

10 THE WITNESS: In part I'm doing that, yes.

11 MR. SCHROEDER: Q. Okay. And is your prevalence
12 odds ratio meant to be a surrogate for some other number or
13 conclusion that you find difficult to derive from the data?

14 A. I don't understand what you mean.

15 Q. Is there some ideal conclusion that if you could
16 follow everybody from the day they were born until the day
17 that they died and had the information on everybody, is
18 there some ideal statistical epidemiological result that you
19 were trying to approximate by using a prevalence odds ratio?

20 A. Yes, but it's conditional on age. At any age the
21 incidence rate ratio of occurrence of a condition in a
22 steady state can be estimated directly by the prevalence
23 odds ratio. Whereas the prevalence ratio doesn't estimate
24 anything that we know of.

25 Q. And the prevalence odds ratio will tell us how

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1 many new cases -- well, you tell me. What is your
2 definition of a prevalence odds ratio?

3 A. It's a measure used in epidemiology in which you
4 take the prevalence odds amongst the exposed and divide it
5 by the prevalence odds amongst the unexposed.

6 Q. And in plain English for the jury, Dr. Smith, what
7 is it that you're trying to determine when you use
8 prevalence odds ratio? What will that tell you?

9 A. I'm trying to get the most appropriate measure for
10 cross-sectional studies.

11 It is, under certain conditions, an estimate of
12 the underlying incidence rate ratio where in a population,
13 if one thinks about or had a cohort study that measured
14 incidence rate conditional on age, then it happens that
15 prevalence odds ratio gives us a direct estimate of that.
16 And as I've indicated, that prevalence ratio itself doesn't
17 estimate anything that relates to the cohort.

18 Q. In a prevalence odds ratio itself, then, if I can
19 try to put it into English, will tell us the number of new
20 cases in whatever the measuring period of time is you think
21 are attributable to -- new cases of asbestosis attributable
22 to smoking? Is that fair?

23 A. Well, no, I -- when you're saying you are trying to
24 put it into English, you're really complicating it. I
25 thought I put it -- but some of these expressions are

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1 technical. But what I was trying to say is that if one
2 looked at a cohort and you had exposed workers and at any
3 age you had an incidence rate in those exposed, by that I
4 mean a number of new diagnoses with asbestosis per worker
5 time at risk, and you divided those to a very common measure
6 in epidemiology, in fact, the most common, then the way to
7 estimate that from a cross-sectional study is to calculate
8 the prevalence odds ratio.

9 Q. And the result would be applicable to tell you at
10 any given age the number of new cases attributable to
11 smoking?

12 A. Well, you could -- no. I -- you could use it for
13 then working out estimates of attributable risk, and you
14 couldn't use the prevalence ratio for that. That is
15 correct. I haven't done that in my report, I don't think.

16 Q. If you look at page 9 in your report, at least
17 it's page 9 of the report you produced which is marked as an
18 exhibit, where you give a -- look at page 9 of that one,
19 Doctor.

20 If you look at the top of page 9, you give us an
21 example of out of 100 smokers and 100 non-smokers, you have
22 91 cases of asbestosis among the 100 smokers, and you have
23 81 cases of asbestosis out of the 100 non-smokers, right?

24 A. Yes.

25 Q. And you develop a prevalence ratio which would be

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1 taking the 91/100 and dividing that by 81/100 to get 1.1,
2 right?

3 A. Correct.

4 Q. And that would tell us that at that given point in
5 time what the prevalence is of asbestosis among smokers,
6 right?

7 A. Well, in a -- and forgive me, I have here used a
8 hypothetical example to demonstrate what's going on. So as
9 long as this is appreciated this is intended to demonstrate
10 something about prevalence ratios rather than directly
11 having data that are commensurate with what happens in the
12 real world, then it is correct.

13 Q. I use it only because it's the example you give in
14 your paper.

15 A. Right. I give it with a specific purpose, though,
16 that sometimes these measures are best demonstrated at what
17 we call the extremes, which may be outside any realm of the
18 real world. It just shows a property of, in this case,
19 prevalence ratios that show that at the extreme like this
20 they can be very misleading.

21 Q. Okay.

22 A. That is not a property of the prevalence odds
23 ratio.

24 Q. My point is to go further with the analysis, so

25 I --

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1 A. Fine.

2 Q. So what you then look at is you say well, what if
3 we ask what was the rate of disease among the last person in
4 each group to get the disease, right?

5 A. Yes.

6 Q. And so you say going from 90 to 91 among the
7 smokers, you look at that rate versus going from 80 to 81
8 among the non-smokers, right?

9 A. Yes. Or more specifically, in the first one going
10 from the situation that nine don't have the disease and then
11 one more gets it, whereas in the other case -- is it 19
12 don't have the disease and one more gets it.

13 Q. Okay. And what you result or get as a result of
14 that analysis is what you call an incident rate ratio,
15 right? That is the --

16 A. I have approximated that here, yes.

17 Q. Okay. And the incident rate ratio is what?
18 What -- give me the definition of that.

19 A. In general? It's the rate of disease in one group
20 per person time at risk divided by the rate of disease in
21 another group per person time at risk.

22 Q. And in this case, what you're trying to
23 approximate is the -- are you trying to approximate the
24 incident rate ratio, ultimately, in determining the
25 relationship between smoking and asbestosis?

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1 A. Yes. Here I'm trying to work out what the best
2 measure or show that one of the properties that supports
3 using the prevalence odds ratio. And I'm just trying in
4 simple numbers rather than present it in the epidemiologic
5 and mathematical theory, to convey to the reader that --
6 without being formally strictly correct, as I think I've
7 explained a little later, it's without what we call
8 mathematical rigor, trying to just illustrate the situation
9 where you can have twice the rate of occurrence in one group
10 over time and another that is grossly underestimated by a
11 prevalence ratio but correctly estimated by the prevalence
12 odds ratio.

13 Q. Is the incident rate ratio the same thing as a
14 prevalence odds ratio?

15 A. It's not the same thing, no. The prevalence odds
16 ratio is a measure you can get from a cross-sectional study
17 which is an estimate of the underlying incidence rate ratio
18 in the cohort out there that generated these or this
19 population we are now looking at.

20 Q. In your report, then, you are trying to get to an
21 incident rate ratio, and to get there you are using a
22 prevalence odds ratio to try to best approximate it? Fair
23 enough?

24 A. Well, I'm trying to get to valid inference from
25 these studies. And a valid inference would relate to

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1 incidence rate ratios and the way to get there from a
2 cross-sectional study is a prevalence odds ratio. But
3 there's no -- there's nothing magical about incidence rate
4 ratio other than that it is a valid measure of the rate of
5 disease in one group divided by that in another.

6 Q. Measured at a given point in time?

7 A. No. No, the incidence rate ratio is what you
8 might have got if you'd been able to follow a cohort of
9 people over time.

10 Q. And you use the prevalence odds ratio in attempt
11 to best approximate an incident rate ratio?

12 A. Well, yes and no. I mean yes in that that is an
13 intermediate step. The real reason is to try and get valid
14 inference about the association here between smoking and the
15 occurrence of asbestosis. Asbestosis develops over time.
16 The cross-sectional study is at one point in time and
17 therein has a limitation. And the question is what is the
18 best way to use the information from a study at one point in
19 time, knowing that underlying this are events that occur
20 over time.

21 Q. How does the incident rate ratio differ from
22 lifetime incidence?

23 A. The one is a --

24 Q. Tell me which one, please. Which is which? You
25 say one is one -- you're getting ready to tell me one is

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1 something.

2 A. Let me just answer. You know, I will explain it
3 in the answer. If you don't mind.

4 Q. All right.

5 A. The one measure is a -- at a certain time point
6 the rate per time divided by the rate in another group. And
7 that we call the incidence rate ratio.

8 There is another measure which is the lifetime
9 risk which is not really incidence per se, because incidence
10 is per time. But you can also talk about or it's loosely
11 referred to as incidence over a lifetime, better described I
12 think as the proportion of people who will get a disease.
13 Sometimes that's referred to as cumulative incidence, where
14 I think earlier you asked me about smoking. In the
15 cumulative incidence, 1 out of 10 smokers will eventually
16 die from lung cancer.

17 Q. Now, so lifetime risk, is that the same thing as
18 cumulative incidence? Or is it an approximation?

19 A. No. Cumulative incidence relates to any specified
20 period of time. If you look at, loosely used, cumulative
21 incidence over a lifetime then becomes the proportion of
22 people with a certain characteristic who will develop the
23 disease.

24 Q. Have you addressed in your report the lifetime
25 risk for persons exposed to asbestos to get asbestosis?

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1 A. I don't think so.

2 Q. Have you addressed in your report the lifetime
3 risk of persons exposed to asbestos for getting asbestosis
4 if they smoke?

5 A. No.

6 Q. Do you have -- strike that.
7 The life -- do you have an opinion on what the
8 lifetime risk is for persons exposed to asbestos to get
9 asbestosis? Is there a way to quantify that?
10 A. It is highly dose dependent. And one could go to
11 different studies and try to estimate it, but I haven't done
12 so for -- in preparation for this deposition.
13 Q. Have you given opinions on the lifetime risk of
14 asbestosis in other cases?
15 A. I may have given opinions on the risk of death
16 from asbestosis, which is, of course, over a lifetime. But
17 not on the -- not that I recall on the incidence of
18 asbestosis. There are a lot of workers who develop
19 asbestosis may not die from the asbestosis. So in that
20 regard, no, I don't think I ever have given an estimate of
21 the proportion of asbestos-exposed workers that will
22 eventually get asbestosis at any dose.
23 Q. Would you agree that the lifetime risk for
24 asbestosis, if we define asbestosis to be the 1/0 or more,
25 that the lifetime risk of that is greater than the incidence

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1 rate ratio?
2 A. No, no and no. There are several parts in there,
3 and no to that question.
4 Q. Why not?
5 A. Well, they're comparing things that don't relate
6 to each other.
7 And in addition, the first part of your question,
8 although I forget it, there's something that was wrong.
9 Q. All right. Let's take it apart. See if we can
10 unpack it.
11 What I want to determine is the risk of getting a
12 1/0 or greater.
13 A. Oh, that part. Well, you said that was
14 asbestosis. And I don't define asbestosis that way.
15 Q. Okay.
16 A. So I don't know how I'm going to answer any
17 question that starts with that, other than saying that I
18 haven't tried to calculate that.
19 Q. Can you tell us at all, Doctor, what the lifetime
20 risk is for getting a 1/0 or higher ILO score for people
21 exposed to asbestos?
22 A. You mean conditional on whatever their exposure
23 was? I've never done that. Whatever you ask on that I'm
24 going to end up saying I haven't done it. But obviously
25 it's dose dependent.

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1 Q. All right. For persons exposed on average for 20
2 to 25 years to asbestos from periods in the 1940s, '50s and
3 '60s, do you have an opinion as to what the lifetime risk is
4 for them of getting a 1/0 or higher?
5 A. Reading on a chest X-ray? No.
6 Q. I'm sorry?
7 A. Reading on a chest X-ray? I was trying to finish
8 your question so I can understand it. The answer is no.
9 Q. Yes, reading on a chest X-ray of 1/0 or higher.
10 That's correct.
11 A. No, I don't.
12 Q. Would you say that the question of whether
13 asbestos workers who smoke would get a 1/0 chest X-ray at
14 any time in their lifetime is measured, best measured by an

15 incident rate ratio?
16 A. No. It's not measuring that.
17 Q. Okay. And same question, would you say that the
18 question of whether asbestos workers who smoke would get a
19 1/0 chest X-ray at any time in their lifetime is best
20 measured by a prevalence ratio?
21 A. No. It's not measuring that.
22 MR. SCHROEDER: Can we take a break?
23 THE VIDEOGRAPHER: Going off the record. The time
24 is 4:14.
25 (Brief recess in proceedings - 4:14 to 4:24 pm.)

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1 THE VIDEOGRAPHER: We're back on the record. The
2 time is 4:24.
3 MR. SCHROEDER: Q. Dr. Smith, you don't cite to
4 any studies in your report that conclude that there's a
5 survivor bias among persons exposed to --
6 THE VIDEOGRAPHER: Doctor, you need to have your
7 microphone on, please.
8 MR. SCHROEDER: Let me start over.
9 Q. You don't conclude in your report, do you,
10 Dr. Smith, or -- strike that.
11 You don't cite to any studies in your report that
12 conclude that there is in fact a survivor bias among smoking
13 asbestos workers?
14 A. I don't have such citations in there, no.
15 Q. And you don't take into account the potential for
16 a survivor bias due to asbestos workers who don't smoke, do
17 you?
18 A. There wouldn't be.
19 Q. Let me see if I can rephrase it.
20 For purposes of your analysis, you assume that
21 there is no survivor bias among asbestos workers who don't
22 smoke, right?
23 A. No. Survivor bias is a differential thing between
24 two groups. So in this instance, it's caused by deaths due
25 to smoking.

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1 Q. And my question is you assume that there's no
2 other survivor bias that may be affecting asbestos workers
3 who don't smoke? Right?
4 A. When compared to whom, though?
5 Q. When compared to the asbestos workers who smoke.
6 A. That is correct.
7 Q. Thank you.
8 A. That when you compare asbestos workers with
9 asbestos workers, that part is the same. The difference is
10 one group smoke and the others -- other doesn't. So then
11 there's two groups to compare. And there you get a survivor
12 bias that -- that relates to the smoking.
13 But -- and that therefore I don't understand which
14 group you now would be comparing non-smoking asbestos
15 workers to in saying a survivor bias. There has to be
16 another comparison group somewhere.
17 Q. There's -- if there is a survivor bias that
18 affects asbestos workers who don't smoke -- I'm not talking
19 about the smoking -- I'm talking about a separate survivor
20 bias that for some other reason that affects asbestos
21 workers who don't smoke.
22 A. When looking at what, though? Compared to --
23 Q. When comparing them -- well, for purposes of your

24 analysis here, comparing them to asbestos workers who smoke.

25 A. But that's what the whole survivor bias is about.

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1 It's between comparisons for those two groups.

2 Q. Correct. And you conclude there's a survivor bias
3 related to smoking, right?

4 A. Correct.

5 Q. And my question is you don't conclude -- strike
6 that.

7 You assume for purposes of that analysis that
8 there's no other survivor bias that affects asbestos workers
9 who don't smoke who could offset whatever affect there is of
10 smoking on survival, right?

11 A. No. That's not correct at all. I mean it's very
12 obvious that smokers died more than non-smokers, period.

13 Q. That wasn't my question, Dr. Smith. My question
14 is --

15 A. I'm trying to answer your question, Counsel. Your
16 question does not make sense, then.

17 Q. If it turned out that asbestos workers who didn't
18 smoke died off at a faster rate because of some other
19 disease process or they got hit by milk trucks or some other
20 reason of death, that would be a survival bias, right?

21 A. If -- if an asbestos worker that doesn't smoke
22 gets hit by milk trucks and an asbestos worker that does
23 smoke doesn't, then lord, what are we talking about? I mean
24 it doesn't make sense. Maybe the asbestos worker that
25 smokes stays at home and smokes all day so they never go out

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1 and get run over by a bus. Anyway, it does not make sense
2 in the real world.

3 I would state that of course that one can, in
4 thinking of survivor bias, then one needs to be aware that
5 there may be different potential things going on. But in
6 this instance, obviously, it's overwhelming that the smokers
7 have a higher mortality rate than the non-smokers.

8 Q. My question, Dr. Smith, was really more narrow
9 than that. My question was if there were a survivor bias
10 affecting non-smoking asbestos workers, you don't take it
11 into -- any of that into account in your analysis, right?

12 A. My analysis takes into account reality. I mean if
13 you could tell me about some survivor bias that's realistic
14 that pertains only to non-smoking asbestos workers, then I
15 would consider it.

16 It's true I haven't got any such thing in my
17 analysis because I'm not aware of any such thing. It makes
18 no sense.

19 Q. You don't in your report quantify the amount of
20 survivor bias that you refer to in your report, do you?

21 A. No.

22 Q. And in fact, in the notes contained in the
23 materials you produced, you indicated that to do so would be
24 difficult. Right?

25 A. That is correct. One needs longitudinal data,

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1 including mortality rates. The fact that it's there, of
2 course, is based on the knowledge that in thousands of
3 studies conducted worldwide, the greatest impact on
4 mortality ever known to mankind has been cigarette smoking.

5 Q. And I will move to strike. Dr. Smith, I simply

6 asked you whether in your report you quantify it, and the
7 answer to that was "no," and the next question was "And that
8 would be difficult to do, right?" And your answer is,
9 "correct," right?

10 A. Without longitudinal data, and I have not tried to
11 do so.

12 Q. Thank you.

13 A. But one couldn't do it.

14 Q. All right. And you don't test for what the actual
15 survival bias, if any, might be, do you?

16 A. I don't know what you mean by that. Not having
17 quantified it or attempted to do so, I don't know what you
18 mean by testing.

19 Q. Well, there's no analysis in your report to
20 attempt to -- to conduct any calculations as to what that
21 effect actually might be, is there?

22 A. That is correct. It's very clear what the
23 direction is and what it means is that the estimates I give
24 are underestimates of the impact of smoking and increasing
25 the risk of asbestos causing asbestosis.

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1 Q. You don't cite to any peer-reviewed literature
2 that addresses survivor bias among asbestosis victims who
3 smoke, do you?

4 A. I have no such citations here. I think the
5 survivor bias in cigarette smokers is widely known and
6 written about, but I don't have citations in my report.

7 Q. Again, Doctor, we'll take as long as it takes. My
8 question was simply that you didn't cite to any, right?

9 A. There are no citations here. And if you want that
10 in isolation so you can trot it out without explaining to
11 the jury what else I said, then each answer I've indicated
12 that there aren't such citations, but I like thinking that
13 these answers should be put into context and explained when
14 I give them.

15 ^ MR. SCHROEDER: Would you mark that, as well,
16 please.

17 Q. You don't in your report demonstrate that survivor
18 bias is affected by any other cause of death, do you?

19 A. I don't --

20 Q. Apart from lung cancer.

21 Let me ask it this way, Dr. Smith. In your
22 report, you conclude that there's survivor bias by pointing
23 to your opinion that smoking asbestos workers develop lung
24 cancer at higher rates and therefore die at a higher rate
25 than non-smoking asbestos workers and to reach the

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1 conclusion that there would be fewer asbestotics to be
2 measured at later dates in time, right? And I would direct
3 your attention to the top of page 7, if that helps you.

4 A. Well, on page 1, I point out that a large part of
5 it is due to smoking and asbestos and the cause of lung
6 cancer, but I don't -- and I note that the highest known
7 cancer mortality risks involves such patients. But clearly,
8 I'm not confining it to that when I use the words "in large
9 part."

10 Q. We might be -- excuse me for interrupting. I see
11 you're referring to your draft of your report. And I think
12 we would be better referring to Exhibit I think No. 8 it is,
13 which is your actual report.

14 Are you referring to the top of the page 7 of your

15 report? Is that right?

16 A. That is correct.

17 Q. Okay. And so you attribute survivor bias among
18 asbestotics in large part to lung cancer synergy, right?

19 A. Yes. Either way you emphasize it, I just say in
20 large part this is because of the synergy between smoking
21 and asbestos in causing lung cancer. And I don't mean by
22 that to exclude all the other deaths that smoking causes.
23 It includes, obviously, heart disease, circ -- circulatory
24 diseases and the many other diseases that you know about.
25 But in this instance, in patients who have asbestosis, lung
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1 cancers are particular attributed to it beyond that in other
2 populations. And that's why I say here "in large part."

3 Q. So you don't demonstrate that the survival bias
4 that you indicate in your report is affected or not by any
5 other cause of death apart from lung cancer synergy, do you?

6 A. I need to hear those words again. I thought it
7 was clear what I'd done, but --

8 Q. Well, you attributed survival bias in large part
9 to lung cancer synergy, right?

10 A. Right. I could have gone in greater detail. I
11 don't like writing long-winded reports that have unnecessary
12 parts to them, but there seems to be no need to expand on
13 all that.

14 There is clearly a survivor bias, and I was
15 illustrating that in large part in this instance, it's due
16 to lung cancer.

17 Q. And in order to have a differential survival bias,
18 you would -- you would require that the smokers who were
19 dying also had asbestosis, right?

20 MR. FORESTA: I'll object to the form of the
21 question.

22 THE WITNESS: Well, in this instance, I think the
23 section that we're now dealing with relates to asbestosis.

24 MR. SCHROEDER: Q. Correct.

25 A. So in this section, everybody has asbestosis.

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1 Q. Well, for there to be an actual survivor bias
2 among prevalence pool, you have to have -- as a condition of
3 your conclusion that there is in fact a survivor bias, you
4 have to have as a necessary requirement the fact that the
5 smokers who are dying are actually the ones who have
6 asbestosis, right?

7 A. No. The whole group, as I understand it we're
8 talking about now, have asbestosis or evidence of it.
9 Amongst them, some smoke, some don't. Those who smoke die
10 much more rapidly than those that don't. So in any
11 cross-sectional study, there are a bunch of people who
12 smoked and had the asbestosis and have already died, and
13 some who don't smoke and have asbestosis that have already
14 died. But there's more impact amongst the smokers and
15 that's where you get the survival bias effect.

16 Q. Is it your testimony, Dr. Smith, that if smoking
17 were to cause deaths -- strike that.

18 Is it your opinion that if the smokers die from
19 other causes such as heart disease or other cancers, that
20 that would not affect your survival bias conclusion?

21 A. It just adds to it.

22 Q. And what you mean by that is it would increase the
23 survivor bias?

24 A. Correct.

25 Q. And it would do that, though, only if the people

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1 that were exposed to asbestos who were dying actually had
2 asbestosis? Right?

3 MR. FORESTA: Object to the form of the question
4 again.

5 THE WITNESS: No, I mean as soon as you say that,
6 I have to say, well, maybe I've misunderstood all of your
7 questions.

8 I've indicated my answers relate to a group of
9 people who have asbestosis. Some smoke and some don't. So
10 behind all that, they have asbestosis. Then the smoking
11 ones amongst them are more likely to die and therefore less
12 likely to be found in your next cross-sectional survey. And
13 that may be from large part lung cancer, but also from other
14 smoking-related causes of death which compound with
15 asbestosis in causing mortality.

16 MR. SCHROEDER: Q. In order -- strike that.

17 If you had more smokers die -- in a
18 cross-sectional study, if you had more smokers who did not
19 have asbestosis dying, that would reduce your -- as you
20 develop a prevalence ratio, that would reduce your
21 denominator, right?

22 A. Let me see. You're -- in -- when you say die, in
23 a cross-sectional study they're all alive and they haven't
24 died. So one has to think about what has happened before
25 and what you're then seeing.

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1 Q. And that's what you're trying to determine, as to
2 whether there's a survival bias that's affecting the numbers
3 you see now, right?

4 A. Correct.

5 Q. And in making that analysis, if smoking -- or if
6 smokers are dying at a faster rate than non-smokers, then
7 that would reduce your denominator as you develop your
8 prevalence ratio, right?

9 A. Well, no. If they're dead already, they're not in
10 the cross-sectional study at all.

11 Q. That's right. And so your denominator would be
12 smaller than it otherwise would be, right?

13 A. If they -- if they lived, yes, I suppose. But
14 they haven't. That's a cross-sectional study.

15 Q. And if the denominator were larger, if in a
16 counterfactual world, so to speak, where you could account
17 for those people who had not survived because they died of
18 heart disease and other things, your denominator for your
19 smokers would be larger, right?

20 A. I -- I don't understand you. We need to start
21 talking about denominator. In the cross-sectional study you
22 have the survivors. If there were fewer people that died
23 you would find more workers in your cross-sectional study.
24 That's true. It applies both to numerator and denominator.
25 It just happens, of course, that the smoking increases the

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1 rates, therefore -- in particular if it's asbestosis. And
2 that's what leads to the bias when you look at the
3 survivors.

4 Q. Okay.

5 A. Let me put it another way, if I could try to help

6 you with this. I mean if you look at people currently aged
7 100, then there are very few smokers who are life-long
8 smokers amongst them. There's hardly any now. Those people
9 age 100 start dying and they've got obviously a few of them
10 smoke, but anything you say about them you've got to
11 consider that they are survivors and that the smokers aren't
12 there or the smokers have succumb. So whatever
13 cross-sectional point you look at in any group of people you
14 are dealing with survivors. And in some instances you get a
15 bias. And in this instance, it's very obvious that since
16 smokers die much more rapidly, especially when they have
17 asbestosis, that when you start looking at people who are
18 living in their relationship with asbestosis and smoking
19 you'll find fewer smokers there. They all have died.

20 Q. If you're going to conduct a prevalence odds ratio
21 and would it be your testimony that under no circumstances
22 would the fact that smokers may die of -- more often than
23 non-smokers of diseases other than lung cancer/asbestosis,
24 would never -- would never decrease your prevalence odds
25 ratio?

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1 MR. FORESTA: Objection.

2 THE WITNESS: I don't understand the question.

3 MR. SCHROEDER: Q. All right. Are there any
4 circumstances under which the prevalence odds ratio would
5 actually decline because of a smoking survival bias?

6 A. If -- if you mean instead of an underestimate be
7 an overestimate?

8 Q. Yes, sir.

9 A. Yes, if smokers lived longer than non-smokers in
10 conjunction with asbestosis.

11 Q. If you're measuring by prevalence odds ratio,
12 which is the measure you conclude in your report.

13 A. I'm not measuring survival bias by the prevalence
14 odds ratio. It's got nothing to do with it.

15 Q. No, I understand that. If you are calculating a
16 prevalence odds ratio, okay? And if your testimony is
17 that's the best approximation for the incidence rate
18 ratio --

19 A. Right.

20 Q. -- are there circumstances under which the
21 prevalence odds ratio actually would decrease because of a
22 smoking survival bias?

23 A. Yes. If smokers lived longer. If smoking
24 enhanced life and you lived longer. And we spent a century
25 showing that's not so, Counsel, so I --

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1 Q. I'll be --

2 A. I don't know what you're getting at. You've gone
3 on this topic so long now I start getting a little
4 irritated. You don't think smoking helps your survival so
5 that you're more likely to be found in a cross-sectional
6 study, do you?

7 Q. My question, Doctor, is whether the -- whether the
8 other survival bias, apart from lung cancer and asbestosis
9 can in fact affect negatively a prevalence odds ratio. And
10 your testimony as I understand it is no, it never would?

11 A. Nothing I know of. You've got the same thing with
12 heart disease. Smoking increases the rate of heart disease,
13 and in asbestotics, too, there's increased rates of heart
14 disease. And you've got the same issue, that if you look at

15 a cross-sectional study amongst those with asbestosis, there
16 will be fewer smokers than there would have been if smoking
17 wasn't having its impact on mortality that is so apparent in
18 conjunction with asbestos.

19 Q. If, indeed, there is a survivor bias, would the
20 necessary result then be that you, in the absence of
21 smoking, would have had more cases of asbestosis among the
22 population?

23 A. Well, to start with --

24 Q. Do you follow that question?

25 A. -- there is a survivor bias, so let's start with

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1 that. I mean that's obvious.

2 I don't know the other part, though. If you're
3 saying that -- I don't know. I don't know what you're
4 asking.

5 Q. If you accept the fact that there's a survivor
6 bias on your testimony, then a necessary result is that
7 there are people with asbestos-related disease who are dying
8 earlier than people who don't smoke?

9 A. Well, that's the cause of the survivor bias.

10 Q. Right. And so that's a necessary result?

11 A. No.

12 Q. Is that you have --

13 A. It's the cause of it.

14 Q. Okay. And if -- would you agree, Doctor, that in
15 the absence of smoking, there would be more claimants to the
16 Manville Trust who would develop other asbestos-related
17 disease?

18 A. In general, yes. I mean there are a lot of people
19 who die from smoking pretty young. And if they hadn't, they
20 might have lived a lot longer and develop asbestos lung
21 disease.

22 I suppose this means that the tobacco companies
23 should be thankfully paid for their kindness. It's getting
24 late. I need another break. I'm sorry.

25 THE VIDEOGRAPHER: Going off the record. The time

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1 is 4:49.

2 (Brief recess in proceedings - 4:49 to 4:55 pm.)

3 THE VIDEOGRAPHER: Back on the record. The time
4 is 4:55.

5 MR. SCHROEDER: Q. Are you ready to proceed,
6 Dr. Smith?

7 A. Yes.

8 Q. All right. I want to talk about prevalence for a
9 minute.

10 Prevalence depends, upon other factors, the
11 duration of the disease, right?

12 A. In part on a cross-sectional study, yes.

13 Q. For instance, even if one were to assume that the
14 prevalence of asbestosis is higher among smokers, it would
15 be erroneous to conclude that smoking causes asbestosis,
16 wouldn't it?

17 A. It would not, but you can't make the inference on
18 that point and number alone. I suppose in answer to your
19 question, it is important to consider overall evidence and
20 not just one piece of information.

21 Q. And what I want to focus on is on the prevalence
22 results themselves. Based on that alone, it would be
23 inappropriate to conclude that smoking causes asbestosis,

24 wouldn't it?

25 A. I don't know how to consider something of that

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1 based on it alone. So you are correct, if you take a
2 prevalence number and say "I've now concluded causation,"
3 then that would be inappropriate. One needs to consider the
4 overall epidemiologic evidence.

5 Q. What else would one need to consider?

6 A. Potential biases, such as the survivor bias.

7 Q. Anything else?

8 A. One would need to have a knowledge of asbestos
9 disease in general and of smoking diseases in general, and
10 of what's found in various cohort follow-up studies, both of
11 people who smoke and of patients who have asbestosis.

12 Q. Are you talking about epidemiological data? Or
13 more than that?

14 A. Well, I would always consider the total body of
15 evidence, but I was referring to epidemiological data, yes.

16 The human data is the epidemiological data, and it
17 is on that basis one has to make inference about causation
18 in humans.

19 Q. If one were to conclude that asbestosis is
20 detected earlier among smokers, that would increase duration
21 for prevalence purposes, right?

22 A. That is a meaningless question to me. I can't
23 understand what you are stating. What are prevalence
24 purposes?

25 Q. For purposes of conducting a prevalence analysis,

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1 the type of which Dr. Nicholson conducted in his expert
2 report, prevalence among smokers would increase if it were
3 true that smoking -- strike that. If it were true that
4 asbestosis is detected earlier among smokers.

5 MR. FORESTA: Correct? Is that a question?

6 MR. SCHROEDER: Right. That's a question.

7 THE WITNESS: When you say earlier, I'm not quite
8 sure what you mean. If you mean there's more cases at any
9 given age, then there are more cases at any given age. If
10 you look at younger people getting asbestosis, then it's
11 likely that that occurs more amongst smokers than
12 non-smokers. If you look at older people getting
13 asbestosis, it's also likely that occurs amongst smokers
14 than non-smokers.

15 The fact that the occurrence is earlier amongst
16 smokers does not mean to say the duration is longer because
17 the progression and mortality may offset that. So I don't
18 think that I can -- I can't agree with the -- I think it was
19 statement you made.

20 MR. SCHROEDER: Q. Is prevalence a good
21 approximator of incidence?

22 A. It's not. It's a different measure.

23 Q. Would you agree --

24 A. The --

25 Q. I'm sorry.

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1 A. It is related to it, but it's a different
2 measure. We don't approximate one with the other.

3 Q. Would you agree that asbestosis is a relatively
4 highly prevalent condition among asbestos-exposed persons
5 exposed to asbestos more than 20 years occupationally?

6 A. When you say relatively high, it's relatively
7 higher than amongst those exposed less than 20 years.
8 Q. In terms of whether something is a rare disease
9 outcome or not, would you say that asbestosis would not be a
10 rare disease outcome for persons exposed to asbestos
11 occupationally for 20 or more years?
12 MR. FORESTA: Object to the form of the question.
13 THE WITNESS: I don't know what you mean by rare
14 disease outcome. It's not rare.
15 MR. SCHROEDER: Q. Would you agree that
16 prevalence is not an accurate measure of relative risk where
17 the prevalence of a condition is high?
18 MR. FORESTA: I'm sorry, I didn't hear the
19 question.
20 MR. SCHROEDER: Q. Would you agree that
21 prevalence is not an accurate measure of relative risk where
22 prevalence of a condition is high?
23 A. Prevalence is not a measure of relative risk to
24 start with.
25 Q. Would you agree that prevalence is not an accurate
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1 measure of risk where the prevalence of a condition is high?
2 A. Prevalence is not a measure of risk.
3 Q. Would you agree that prevalence has been
4 applied -- strike that.
5 Would you agree that epidemiologists consider
6 prevalence to be more relevant outside of etiologic
7 research, such as for planning for health care purposes,
8 et cetera?
9 MR. FORESTA: Object to the form of the question.
10 THE WITNESS: I don't know what you mean.
11 MR. SCHROEDER: Q. Would you agree that use of
12 prevalence as an indicator of potential relationships
13 between a factor and disease is more relevant out of the
14 realm of etiologic research?
15 A. I don't know. I do etiologic research. That's
16 what my career is on. It's relevant and can be useful in
17 certain study designs. As I've indicated, they normally
18 would be considering things like prevalence odds ratios.
19 Q. You're familiar with Rothman, are you not? The
20 epidemiologist?
21 A. Yes.
22 Q. Do you find Dr. Rothman to be authoritative in the
23 field of epidemiology?
24 A. I don't know what you mean.
25 Q. Do you find Dr. Rothman's opinions to be opinions
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1 that in epidemiology that are widely accepted in the field?
2 A. I don't know what you mean. He has written a
3 textbook. It's a good textbook, especially the first
4 edition.
5 Q. All right.
6 A. He's also published other articles that made
7 important and useful contributions. But I don't think of
8 epidemiologists as being authoritative or not. That would
9 be the end of science.
10 Q. Well, Dr. Rothman, in his textbook, discusses the
11 utility of prevalence analysis, right?
12 A. I don't recall. If you refer to him by name, you
13 have to be referring to his earlier edition. The more
14 recent one has I think three authors.

15 Q. I'm referring to the second edition of Modern
16 epidemiology by Ken Rothman and Sandra Greenland. You are
17 familiar with that text, right?

18 A. Yes.

19 Q. And in that text, would you agree with
20 Dr. Rothman's statement that seldom is prevalence of direct
21 interest in etiologic applications of epidemiologic
22 research?

23 A. Well, I don't know how you know he made that
24 statement, but in any case, reread the statement and I'll
25 tell you if I agree with it or not. But --

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1 Q. All right. Do you recognize this to be a copy of
2 Dr. Rothman's textbook?

3 A. Well, if you're talking about the more recent
4 edition.

5 Q. Yes.

6 A. It's got more than one author.

7 Q. Rothman and Greenman. The one we just referred
8 to?

9 A. Right.

10 Q. And do you see there under the section Utility of
11 Prevalence -- there's a cover page at the beginning there,
12 Dr. Smith.

13 A. Yes, it's got two authors and 15 contributors.

14 Q. Okay.

15 A. I don't know whose chapter this is.

16 Q. Okay. It's page 44 of the text, and there's a
17 section called Utility of Prevalence. Do you see that?

18 A. I see that.

19 Q. And do you see -- what's the first sentence say?

20 A. "Seldom is prevalence of direct interest in
21 etiologic applications of epidemiologic research."

22 Q. Do you agree with that statement or disagree with
23 it?

24 A. I disagree with the use of the word "seldom." I
25 would say that it's not -- or more commonly in studies in

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1 what we call analytic epidemiology, we have case control
2 studies and cohort studies. I think in workplace studies,
3 the most common type of study is the cross-sectional study,
4 and in that setting, prevalence is quite common, although
5 neither Ken Rothman or Sandy Greenland work in that field.

6 Q. Would you agree, Dr. Smith, that a prevalence
7 ratio, the type of which Dr. Nicholson conducted in his
8 expert report, that is, the smoking/non-smoking prevalence
9 ratio for asbestosis, is a crude ratio?

10 MR. FORESTA: Object to the form of the question.

11 THE WITNESS: I don't know what you mean. If you
12 mean it's not age adjusted, I would need to look at
13 Dr. Nicholson's report.

14 MR. SCHROEDER: Q. Well, would you agree that it
15 doesn't adjust for factors such as dose of asbestos?

16 A. I don't recall. I'd need to look at his report.
17 I don't think it did. But then you wouldn't adjust for dose
18 in that sense. You look for dose-response relationships.

19 Q. And that is not something that he did in his
20 report, did he?

21 A. I don't think he did. He might have. I don't
22 recall.

23 Q. And you don't do that in your report, do you?

24 A. Correct.

25 Q. And prevalence ratios for asbestosis also don't

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1 adjust for time since first exposure, do they?

2 A. I don't know what you mean by adjust for. In a
3 prevalence estimate, it's what is present currently, and by
4 definition it doesn't have time information like that.

5 Q. For example, if it turned out that all the smokers
6 had been exposed -- that had 30 years time from first onset
7 and all the non-smokers had 12 years time from first onset,
8 you would want to adjust for that in arriving at a
9 prevalence, would you not?

10 A. It depends what the study was and what you were
11 going to do.

12 Q. If you want -- for purposes of this case, if you
13 wanted to give an opinion as to what the prevalence of
14 smoking is -- I'm sorry. Prevalence of asbestosis among
15 smokers, you would want to adjust for that, would you not?

16 A. No. I don't think it's reasonable to worry about
17 far-fetched scenarios in interpreting epidemiological
18 studies. By far-fetched, I mean that the degree and extent
19 to which that would have to happen to produce meaningful
20 bias is not in the realm of reasonableness.

21 Q. What's the basis for your conclusion that you
22 should use a prevalence odds ratio for conditions such as
23 asbestosis that are more than rare outcomes among asbestos
24 workers?

25 MR. FORESTA: I'm going to object to the form of

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1 the question. Haven't we been over this, Tom?

2 MR. SCHROEDER: I don't know what the -- I don't
3 want the -- let me rephrase it.

4 Q. Do you have -- can you cite me, Dr. Smith, to any
5 peer-reviewed literature that concludes that a prevalence
6 odds ratio among asbestos workers is a more appropriate
7 measure?

8 MR. FORESTA: Of what?

9 THE WITNESS: Than what?

10 MR. SCHROEDER: Q. Than prevalence. I'm sorry.

11 A. For looking at smoking and asbestosis? No. I'm
12 not aware of anybody who's addressed that.

13 The literature is in the general domaine.

14 Q. Okay. Would you agree that one of the conditions
15 for the use of a prevalence odds ratio for determination of
16 a cumulative incidence ratio is the requirement that you
17 have a rare outcome?

18 A. No. Absolutely not. Those two aren't related.
19 You are now talking about cumulative incidence. I used it
20 in order to make valid inference from the study about
21 smoking and asbestosis, and indicated that it has a
22 relationship to the underlying incidence rate ratio. And
23 that is present whether or not the disease is rare.

24 It happens that the prevalence ratio gets closer
25 and closer to being the same thing as the prevalence odds

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1 ratio the rarer the disease. For example, if the disease
2 occurrence in a population is, say, less than 2 percent,
3 you'll find it doesn't make much difference which estimate
4 you obtain. But it is still true that on a fundamental
5 basis the prevalence odds ratio is the more appropriate

6 measure.

7 Q. The corollary of that statement, I take it, would
8 be that a prevalence odds ratio departs further from a
9 prevalence ratio the less rare the disease?

10 A. Well, I wouldn't word inappropriate. I think it's
25 referring to my report.

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1 I just marked page 80 to have a look at it again.

2 Then I think my note on -- in the top of page 81
3 is self-explanatory. It refers to the survival bias that
4 we've talked about earlier today.

5 And I was going to check some more material at the
6 bottom of 81. It is not, in my opinion, correct, that
7 reading, but I was going to look at it again.

8 And the last statement on that page is simply not
9 appropriate.

10 Q. What do you mean by that, it's not appropriate?

11 A. He fails to acknowledge there could be a similar
12 effect as a result of early deaths due to heavy asbestos
13 exposure.

14 The context in which I was referring to this was
15 differential survivor bias that relates to smokers and
16 non-smokers. The idea that he's raising presumably means
17 that he has some idea that smokers and non-smokers have a
18 difference in whether or not they have heavy asbestos
19 exposure, and that's sort of speculation on which I know no
20 basis.

21 The fact that survivor bias is reduced does not
22 mean it's eliminated, so the top two sentences in that
23 paragraph on page 82 in my view were not pertinent.

24 On page 83, again, is these statements that I
25 dismiss findings without acknowledging they could be real.

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1 It makes no sense at all. The survival bias due to smoking
2 is obvious and is real and would be expected in all these
3 occasions. So, again, I disagree with these statements.

4 The fact that asbestos disease increases with
5 latency in no way alters the impact from smoking. In here
6 and elsewhere he keeps discussing latency in a way that just
7 seems to try to submerge the impacts of smoking. But I'm --

8 On the top of page 85, he refers to a study in
9 which the authors noted smoking was a significant
10 contributor. In the next paragraph he refers to a study in
11 which smoking produced a doubling of risk.

12 On the next page, page 86, there's reference to a
13 relative risk of 1.08 per 10 pack/years. That would
14 translate to a relative risk of about 1.5 for a 50
15 pack/years and over twofold risk for 10 pack/years, both
16 smoking histories which are not uncommon.

17 On page 87, reference is made to relative risk of
18 1.015. When that's used for a 50 pack/year history, the
19 relative risk would be more than double, 2.11.

20 On page 87, he refers to a study where smoking was
21 associated with a fourfold increase, nearly, and threefold
22 in ex-smokers. All of these studies are consistent with or
23 support a major smoking impact on asbestos causing
24 asbestosis.

25 The next section I didn't review. This is

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1 selected studies on progression of parenchymal

2 abnormalities. I didn't review because of time and because
3 I didn't think it important.

4 Q. Why did you deem it not to be important?

5 A. Because it doesn't address whether or not smoking
6 causes the increased rate of parenchymal abnormalities.

7 It's not necessarily unimportant, but in the time
8 I had when I was reviewing this on the plane, I decided to
9 skip that section since it was already clear from his report
10 that he was producing study after study which he was not
11 aware were actually supporting the role of smoking causing
12 asbestosis. So I decided to go on to the next section.

13 On page 98, again he says smoking exposure is
14 better characterized than asbestos exposure in most of the
15 studies. I disagree with that.

16 Then I've got some markings on this pleural
17 abnormality context which, to save time, shall I skip? Or
18 do you want to get into that?

19 Q. No, I tell you what, if it turns out that that
20 part of the case which we believe to be gone surfaces in any
21 form or fashion, we will then have an agreement with counsel
22 that they will produce you for further questioning. Right?

23 MR. FORESTA: I agree to that.

24 MR. SCHROEDER: Okay.

25 THE WITNESS: Then the remaining -- remainder just

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1 marks some references I thought it might be of interest to
2 get.

3 MR. SCHROEDER: Q. Are there any that you
4 thought, of the references that you thought would be --
5 well, strike that.

6 I take it that the references you marked were ones
7 that you were not immediately familiar with?

8 A. No. I've read -- no, that's not quite true. The
9 first one, for example, is by Sterling and it's a study I've
10 read, but I thought it might be of interest to reread it. I
11 didn't remember all its context -- contents.

12 And again, on number 12 there, I've read that
13 article by Walter, but I thought it might be useful to
14 reread it.

15 Q. What is your comment on item number 90?

16 A. Number?

17 Q. Page 112. You say also 91, 92, 93 and 94.

18 A. Oh, I thought it would be of interest to read or
19 reread those, those series of references.

20 Q. Okay. Those are references to studies not yours?

21 A. Correct.

22 Q. I see. Okay. We are about done. You told us
23 that you had at one point read the deposition of Dr. Richard
24 Karchman, right?

25 A. I scanned it.

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1 Q. Is there anything in Dr. Karchman's deposition
2 that you disagree with?

3 A. Well, I need to go right through it. I mean
4 that's not -- I said I've scanned it. I -- if I recall, I
5 was aware that he was -- or referred to Dr. Lee's report.
6 And I think he doesn't understand it.

7 Q. For what reason? Explain what you mean by that.

8 A. Well, Dr. Lee's report supports a multiplicative
9 effect of asbestos and cigarette smoking which strongly
10 would, in my opinion, support biological synergy. And I

11 don't think Karchman understands that. In the presence of
12 multiplicative relative risks you may find the relative risk
13 estimates for the individual factors to appear unchanged.

14 Q. Do you -- did you find anything in Dr. Lee's
15 report that you disagreed with?

16 A. I didn't go right through it. Once I saw that he
17 concluded that the effects were multiplicative, then I
18 didn't see any need to.

19 Q. Apart from what you've told us in Dr. Karchman's
20 deposition, is there any other aspect of his testimony that
21 you found to be problematic or wrong?

22 A. Oh, I don't recall. I haven't reviewed it
23 recently. I need to go right back through it.

24 Q. Is his deposition something you had brought with
25 you today?

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1 A. Yes.

2 Q. Did you make any markings on his deposition
3 transcript?

4 A. No. Well, this is his expert report. His
5 supplemental report. I'm not sure I do have the deposition
6 here. I think -- well, this says deposition transcript.

7 Q. What is that document, Dr. Smith? What is that
8 you're looking at?

9 A. It says Supplemental Expert Report for Richard
10 Karchman. But it's in the United States District Court,
11 Eastern District of New York. So I guess it's a legal
12 statement or something. I don't know what it is.

13 Q. Have you read that document?

14 A. I scanned it at one point, I think.

15 Q. Do you have any opinions with respect to that
16 document? While you're looking at that, in order to
17 expedite the process, since we are at the end of the day,
18 are there other materials in your bag there that relate to
19 this case that are not on the table?

20 A. No. I had one or two articles, but no other --

21 Q. Can I see those, please, sir?

22 A. Hmm?

23 Q. Can I see what other articles you have?

24 Okay.

25 A. I -- well, I could comment as I go along. He

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1 says: "I will explain that this means that smoking is
2 actually described scientifically as a risk factor for lung
3 cancer." That is -- if he means by that that it should not
4 be described as a cause of lung cancer, that's utterly
5 wrong.

6 Then there's reference to Dr. Cartman's
7 intoxicating effects, which I presume is a typo, but it is
8 rather funny. Pharmacological tolerance to my intoxicating
9 effects.

10 Anyway, before that, it seems he's saying that the
11 scientific evidence does not support the conclusion that the
12 nicotine in cigarettes causes smokers to experience
13 intoxication or physical dependence. But anyway, he then
14 says that smoking cigarettes is addictive, so I would agree
15 with that.

16 He states that he'll testify that it's his opinion
17 that it was reasonable for Philip Morris and other tobacco
18 companies to develop cigarettes with low tar and nicotine
19 yields. I totally disagree with that. They should have

20 stopped producing them altogether.

21 Q. Have you ever smoked, Dr. Smith?

22 A. Yes.

23 Q. When did you smoke?

24 A. Mainly when I was a student.

25 Q. A student where?

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1 A. In New Zealand.

2 Q. A college student?

3 A. College and medical school.

4 Q. What year did you start smoking?

5 A. Hmm?

6 Q. What year did you start smoking?

7 A. Well, I started smoking a pipe thinking it wasn't
8 so bad, and that was about in 1970 or something like that.

9 Q. When did you begin smoking cigarettes?

10 A. I first started trying them about three, four
11 years after that.

12 Q. For how long after that did you smoke?

13 A. Well, it was always intermittent.

14 Q. When did you quit?

15 A. Well, at that time I quit after around I think
16 1975-78, but later I smoked some more cigarettes. It's been
17 intermittent.

18 Q. When --

19 A. Problematic as to totally stop.

20 Q. When did you last smoke cigarettes?

21 A. I smoked some cigarettes about a week ago on one
22 occasion while I was traveling and missed a flight and was
23 up all night. I don't smoke regularly, but I find it very
24 difficult at times under certain situations not to. And I
25 prefer not to talk about it more. It's to me a considerable

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1 embarrassment.

2 Q. Well, how many cigarettes -- do you smoke
3 regularly? Daily?

4 A. Way back I have, yes.

5 Q. Now do you?

6 A. No.

7 Q. You smoke from time to time?

8 A. Yes.

9 Q. How long will you go between cigarettes on a day
10 basis?

11 A. Well, it's quite intermittent. In periods of
12 difficult circumstances when I'm tired and under stress and
13 in unusual settings that I tend to succumb. And that may
14 vary. I mean it --

15 Q. In those circumstances, how many will you smoke
16 under those conditions in a 24-hour period?

17 A. Well, usually less than five cigarettes.

18 Q. Do you smoke filtered or unfiltered?

19 A. Can I continue with this?

20 Q. Sure.

21 A. I've answered several -- these questions are
22 personal. They're difficult. They're not part of my expert
23 opinion.

24 Q. No, but --

25 A. I do not expect to be testifying about them.

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1 They're an embarrassment to me. I realize I need to ask

2 questions like this, but -- you know, I'm reading this at
3 the same time, and every now and then you're interrupting me
4 with another of these questions, so --

5 Q. My question is really designed to know whether --
6 whether you make a decision on what type of cigarette to
7 smoke based on your perception of the risks of certain types
8 of cigarettes. For example, do you smoke filtered
9 cigarettes as opposed to non-filtered?

10 A. It's whatever is easily available. Under those
11 circumstances they are usually filtered.

12 Q. Would you prefer the filtered because of safety
13 reasons?

14 A. Under those circumstances, I don't think about
15 it. Every other time I do.

16 Q. Okay.

17 A. It's like I under certain settings really feel I
18 want to smoke, and I don't in those situations sit down and
19 calculate it, I'm afraid.

20 Now, are we finished with those questions?
21 Because I'm trying to read this at the same time. And I
22 would like you to finish them, if you don't mind.

23 Q. Well, I think --

24 A. Otherwise I can't read this report.

25 Q. What I was going to propose is, because I had

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1 hoped we were really done, but I do want to know what you --
2 whether you've -- well, maybe I can ask it this way. Do you
3 intend to offer any opinions at trial with respect to
4 Dr. Karchman's expert report?

5 A. I don't intend to offer opinions at trial. If I'm
6 asked certain questions, I'll try to answer them.

7 MR. FORESTA: Would it be easier if you asked him
8 to focus solely on anything in Dr. Karchman's report that
9 relates to the scope of his expert opinions --

10 MR. SCHROEDER: Well, here's --

11 MR. FORESTA: -- in this case?

12 MR. SCHROEDER: Here's what I'm trying to get at,
13 really, is if -- I don't want to close up shop now and go --
14 well, that's not true. I'd be happy to close up shop now
15 and go. I don't want to do that only to go to trial and
16 then have you testify at some length about what Dr. Karchman
17 has said. And so if somebody could tell me that you have no
18 intention of, as part of your testimony, enveloping anything
19 that's in Dr. Karchman's report, then I'm done with the
20 report.

21 If there's the possibility that at trial you're
22 going to be asked by counsel to comment on what Dr. Karchman
23 has either testified to or written in his report, then I
24 want to get it now while we're here.

25 MR. FORESTA: Right. But I think your question

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1 before was "Is there anything in Dr. Karchman's report that
2 you disagree with?" And I think that's prompted responses
3 that go way beyond what he is -- has been retained to
4 testify in this case.

5 To the extent that Dr. Karchman has testified in
6 his deposition about matters relating to epidemiology, yes,
7 Dr. Smith will be testifying on that subject.

8 I haven't memorized Dr. Karchman's report, I can't
9 tell you whether there's something specific in there
10 relating to epidemiology that falls within the rubric of

11 opinions that Dr. Smith intends to give. And I think he has
12 to go through that to figure it --

13 MR. SCHROEDER: And the difficulty I'm concerned
14 about is whether during your counsel's questioning of
15 Dr. Karchman there were parts of the report that he chose
16 not to cover and then wait and address at trial. So I think
17 I probably need to go through the report then.

18 MR. FORESTA: Right. But if we -- as I said
19 before, if you just narrow your question to topics in
20 Dr. Karchman's report that relate to the scope of his expert
21 retention in this case, I think it will avoid questions or
22 answers like "I disagree with his comments on low tar
23 cigarettes."

24 THE WITNESS: Okay. Can I -- since I've now
25 virtually finished reading it and I've come to the one

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1 substantive epidemiological piece of information.

2 MR. SCHROEDER: Q. Fair enough.

3 A. I note that --

4 MR. FORESTA: Just in time.

5 THE WITNESS: I disagree when he states "The
6 increased risks for lung cancer in asbestos-exposed
7 cigarette smokers can best be explained by a non-statistical
8 interaction," whatever that is. But then in parentheses, it
9 says "independent, non-multiplicative interaction."

10 Those words are out of context, inappropriately
11 used, and if by that he means that there's no synergistic
12 impact such that the effects in epidemiological studies are
13 of the order of multiplicative, some studies finding more,
14 some somewhat less, then I completely, as you know, disagree
15 with that statement.

16 Q. Okay. Anything else in his report?

17 A. And then what he says, "this means that these risk
18 factors are independent." Well, the data simply do not --
19 the epidemiological data or should I say the human data
20 simply do not support that. I think that's all.

21 Q. Okay. And those -- there are no other reports or
22 depositions that you've reviewed that you have comments on,
23 right?

24 A. Well, yes. And I suppose I am a wee bit confused,
25 because the cover letter said report and deposition, and

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1 maybe I don't have it. Or maybe I have it and it's got
2 messed up in my office and I didn't bring it. I don't
3 recall.

4 Q. As you presently are here, is it fair to say you
5 don't have any recollection of anything in the deposition
6 that you found either troubling or disagreed with beyond
7 whatever you've testified to today?

8 A. I don't remember what's in the deposition.

9 Q. You've never looked at any of the actual data on
10 the Trust claimants, have you?

11 A. Correct.

12 Q. Your opinion in this case is based solely on the
13 epidemiological literature? Your opinions in this case are
14 based solely in epidemiological literature?

15 A. On the published scientific studies, yes.

16 Q. One of the things you just handed me that you had
17 in your materials is a 1986 publication by Kyle Steenland
18 and Michael Thun. Right?

19 A. Correct.

20 Q. And you understand that Kyle Steenland is
21 associated with NIOSH, right?

22 A. Correct.

23 Q. Which is the National Institute for Occupational
24 Safety and Health, right?

25 A. It is.

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1 Q. And this document was sent to you by the Orrick
2 Herrington law firm, right?

3 A. Oh, well, that copy may have been. I've got many
4 copies of that article. I've had it in my file since it was
5 published.

6 Q. Why is it that this one came from the Orrick
7 Herrington law firm? Did you request it or --

8 A. No.

9 Q. Do you know why it was sent to you?

10 A. No.

11 Q. Okay.

12 A. Other than at times I may have been sent some
13 articles. I mean in that instance, as in others. I already
14 had it. But I don't recall specifically.

15 Q. One of the statements in this article says that
16 the 1968 study by Dr. Selikoff and the 1972 study by Barry
17 were small studies in which no lung cancer deaths were
18 observed among non-smoking males, and virtually none were
19 expected. Do you agree with that statement?

20 A. I haven't separately analyzed it.

21 Q. Okay. If in fact that is indeed the case, would
22 you agree with their next statement that "it is impossible
23 to draw quantitative conclusions from these studies, and we
24 will not review them here"?

25 A. Well, you can draw some quantitative conclusions,

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1 but in the context in which they're talking, I think I
2 understand what they were referring to. They were looking
3 at statistical interaction in that paper, and it is correct,
4 they couldn't have done that.

5 Q. There's a reference to a Dr. Barry Horn in some of
6 your materials. Who is he and what did he do in this case?

7 A. He's a pulmonologist in the Bay Area. I don't
8 know what he did in this case. I was at some early
9 discussion I think in Mr. Kazan's office and he was there.
10 I remember that. But beyond that, I don't know.

11 Q. And you don't claim that there's any synergy with
12 respect to smoking and asbestos and asbestosis, do you?

13 A. Well, I usually -- well, I do use the word
14 "synergy" to refer to two agents which themselves can cause
15 the disease and when they're there jointly they act
16 synergistically.

17 One could use it and say when two agents act
18 jointly and increase the rate of disease, there's synergy.
19 So one could use it for smoking and asbestos in the cause of
20 asbestosis, but I don't. I would there talk about an
21 effect-modifying causal impact of smoking.

22 Q. So as you use the term "synergy," that would apply
23 to the relationship -- relationships for lung cancer, but
24 not asbestosis? Right?

25 A. Correct. Although, as I say, I wouldn't quibble

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1 too much if -- if as long as somebody was clear what they

2 meant, if they used the word "synergy" for that. Some of
3 these words are not defined in a way that everybody's using
4 them exactly the same way, and I'm not about to say the way
5 I use it is the only way it should be used. I'm just saying
6 that's what I do. And when I'm thinking of synergy, I'm
7 thinking that both agents can separately cause a disease and
8 when they are jointly, they enhance each other such that the
9 disease rates are much higher than you expect. And when one
10 factor doesn't cause the disease on its own but enhances
11 another, I talk about effect modifying.

12 MR. SCHROEDER: I think we're done. Give me just
13 a few seconds.

14 Q. One other question. You had said earlier, you
15 had commented earlier in the day about a relationship
16 between smoking and lung cancer as to whether it was a
17 sufficient -- we used the phrase "sufficient cause"? Do you
18 remember that testimony?

19 A. You used the phrase sufficient?

20 Q. I used the phrase "sufficient." Do you remember
21 that?

22 A. Yes.

23 Q. You've testified in other cases, have you not,
24 that it's unlikely that smoking acts alone in the causation
25 of lung cancer? Right?

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1 A. Well, I may have said that, yes. In the context
2 that I think of multi-factorial causation of disease, and
3 even in those who smoke in which smoking caused the lung
4 cancer may be the only external cause, there may be
5 intrinsic factors such as genetics in which are causally
6 involved and modifying factors such as diet. So I could --
7 in that context, I could well make the statements like that,
8 and I do make statements like that.

9 MR. SCHROEDER: Dr. Smith, thank you for your
10 time. We did not get to talk to you at all about any
11 documents that relate to your comments with Dr. Erren on his
12 report, and I do reserve the right to, if necessary, ask for
13 more time with you, depending on what materials are produced
14 in that connection. Thank you.

15 THE VIDEOGRAPHER: This is the end of tape 5 of
16 volume 1 in the deposition of Dr. Allan Smith. Going off
17 the record. The time is 7:01.

18 (Whereupon the taking of the Witness' testimony
19 was concluded at 7:01 p.m.)

20 ---oOo---

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22
23
24 _____ DATE

SIGNATURE of the WITNESS

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